CFO15976

US 2005/0144564 A1

FIG. 1

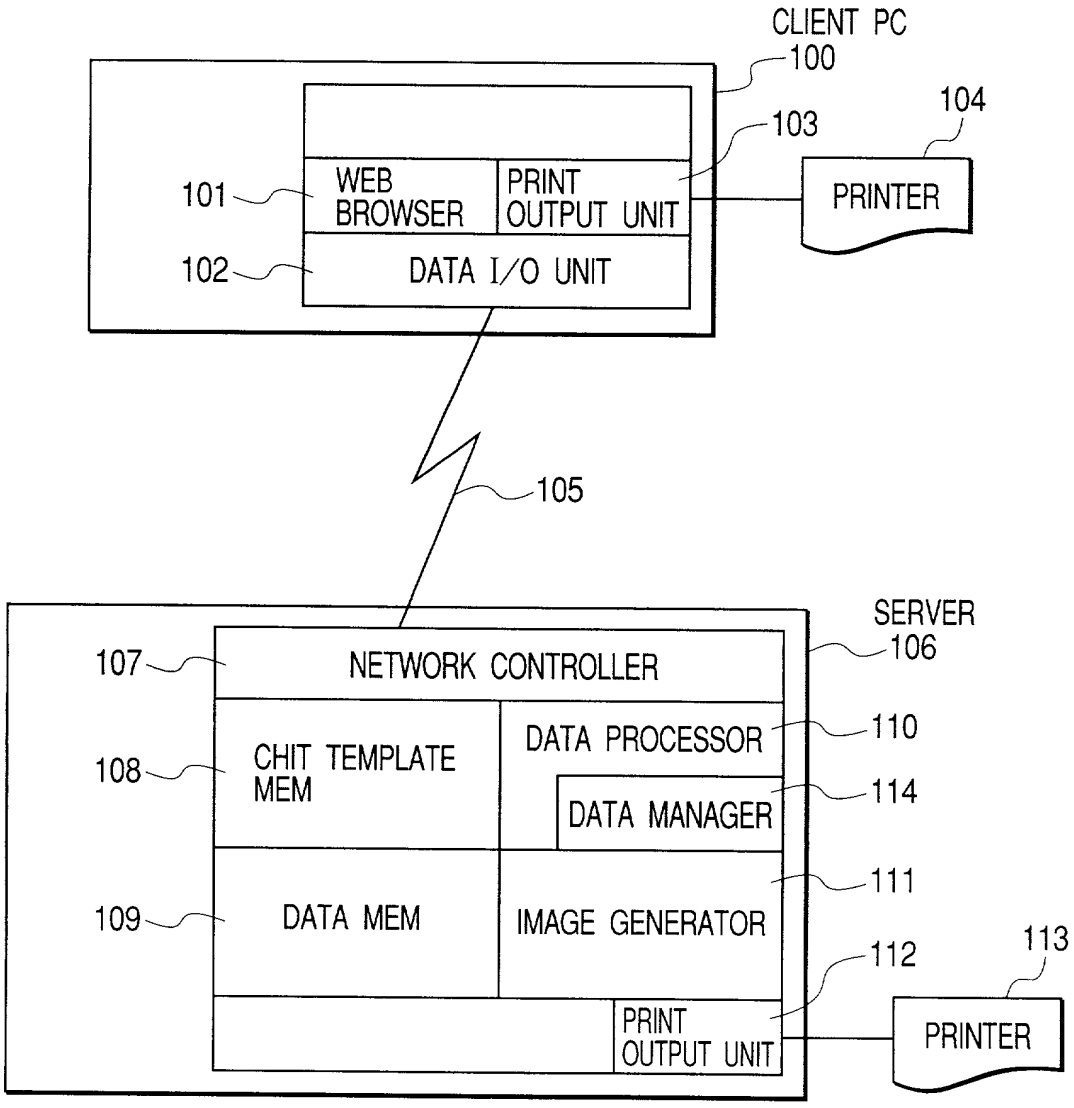


FIG. 2

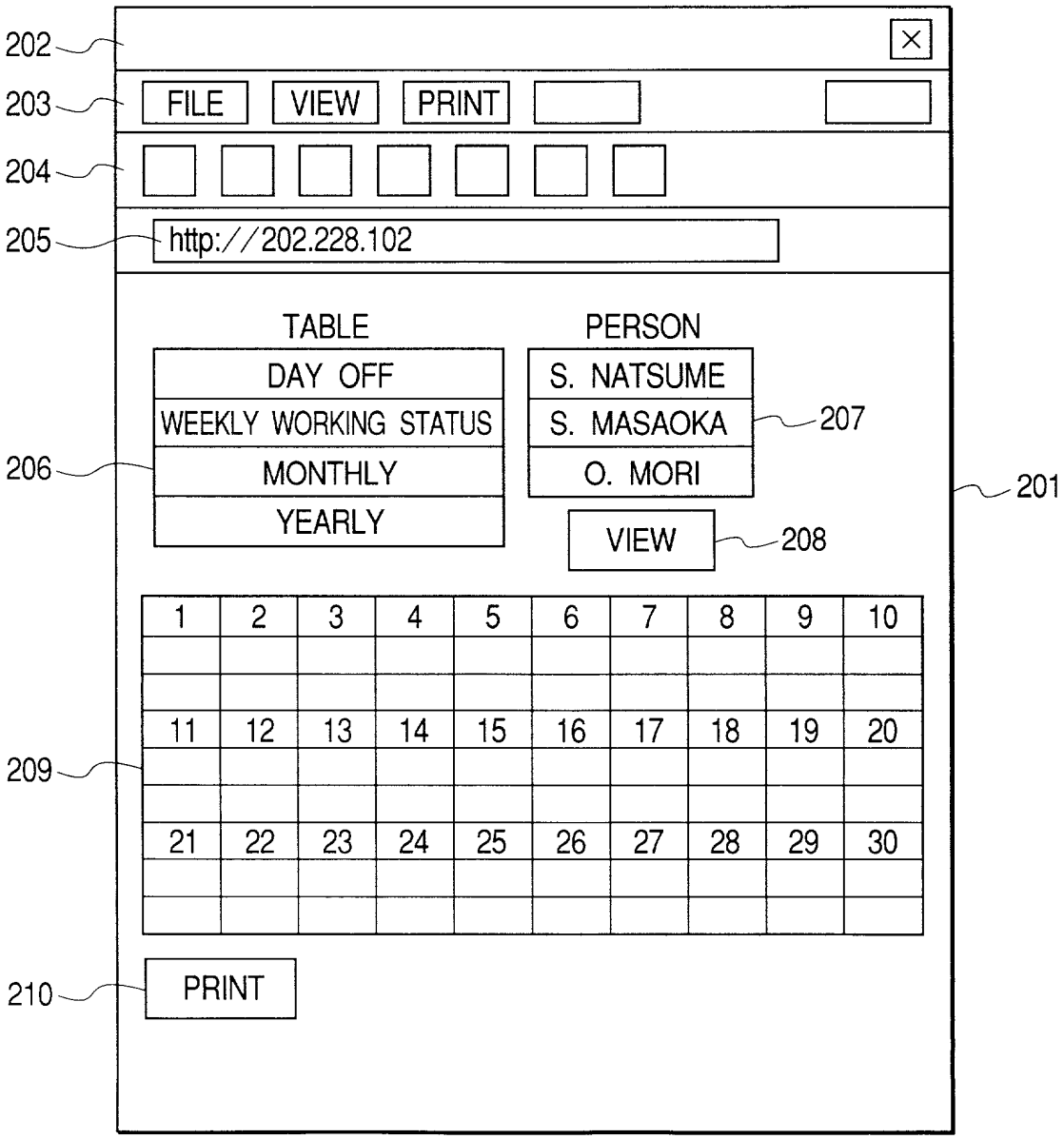

202
203
FILE
VIEW
PRINT
204
205
http://202.228.102
TABLE
DAY OFF
WEEKLY WORKING STATUS
MONTHLY
YEARLY
206
PERSON
S. NATSUME
S. MASAOKA
O. MORI
207
VIEW
208
201
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
209
PRINT
210

FIG. 3

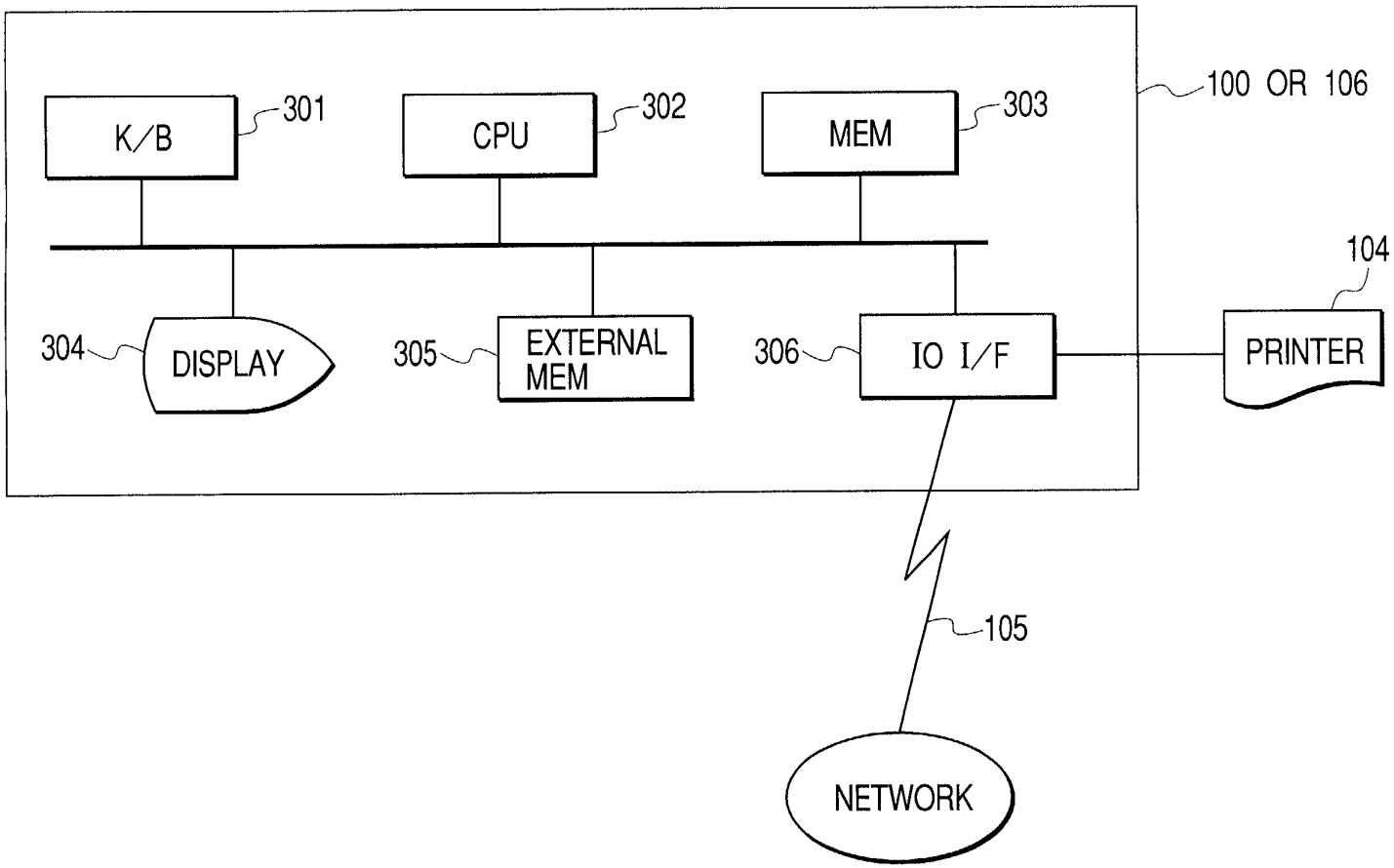

100 OR 106
K/B
301
CPU
302
MEM
303
104
304
DISPLAY
305
EXTERNAL MEM
306
IO I/F
PRINTER
105
NETWORK

FIG. 4

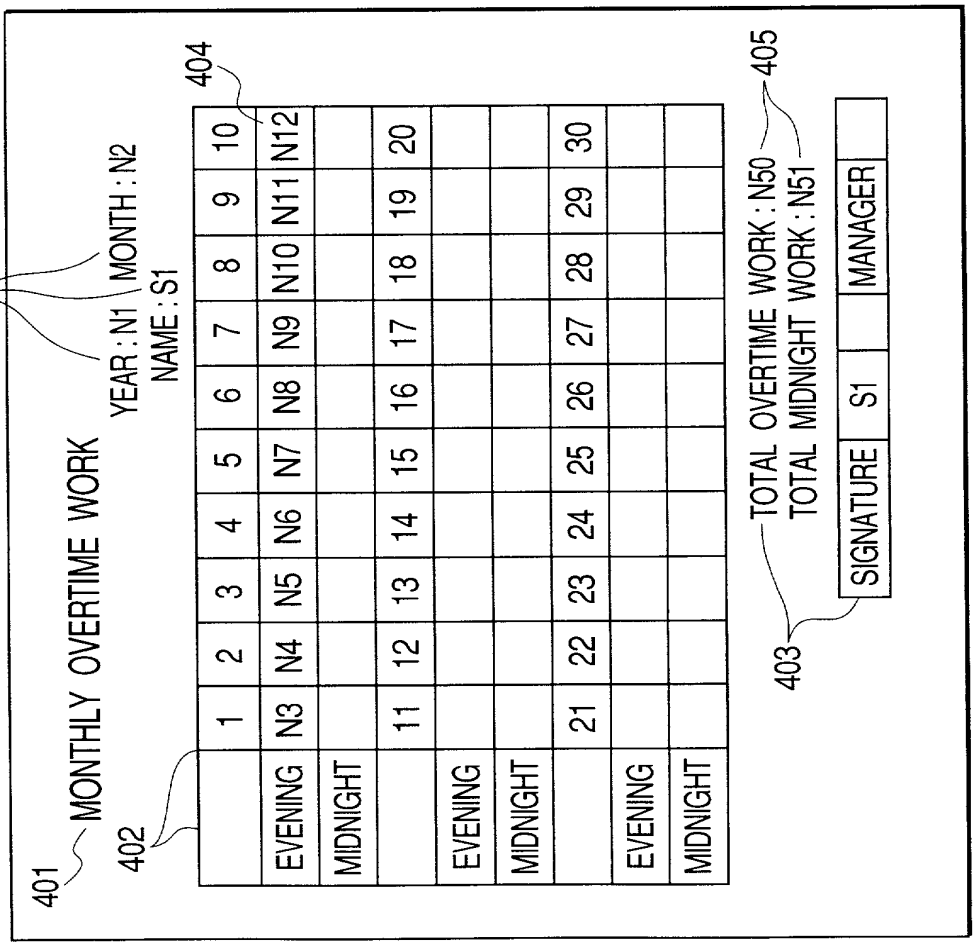

401
MONTHLY OVERTIME WORK
YEAR : N1
MONTH : N2
NAME : S1
404
402
404
1 2 3 4 5 6 7 8 9 10
EVENING N3 N4 N5 N6 N7 N8 N9 N10 N11 N12
MIDNIGHT
11 12 13 14 15 16 17 18 19 20
EVENING
MIDNIGHT
21 22 23 24 25 26 27 28 29 30
EVENING
MIDNIGHT
405
TOTAL OVERTIME WORK : N50
TOTAL MIDNIGHT WORK : N51
403
SIGNATURE S1 MANAGER

FIG. 5

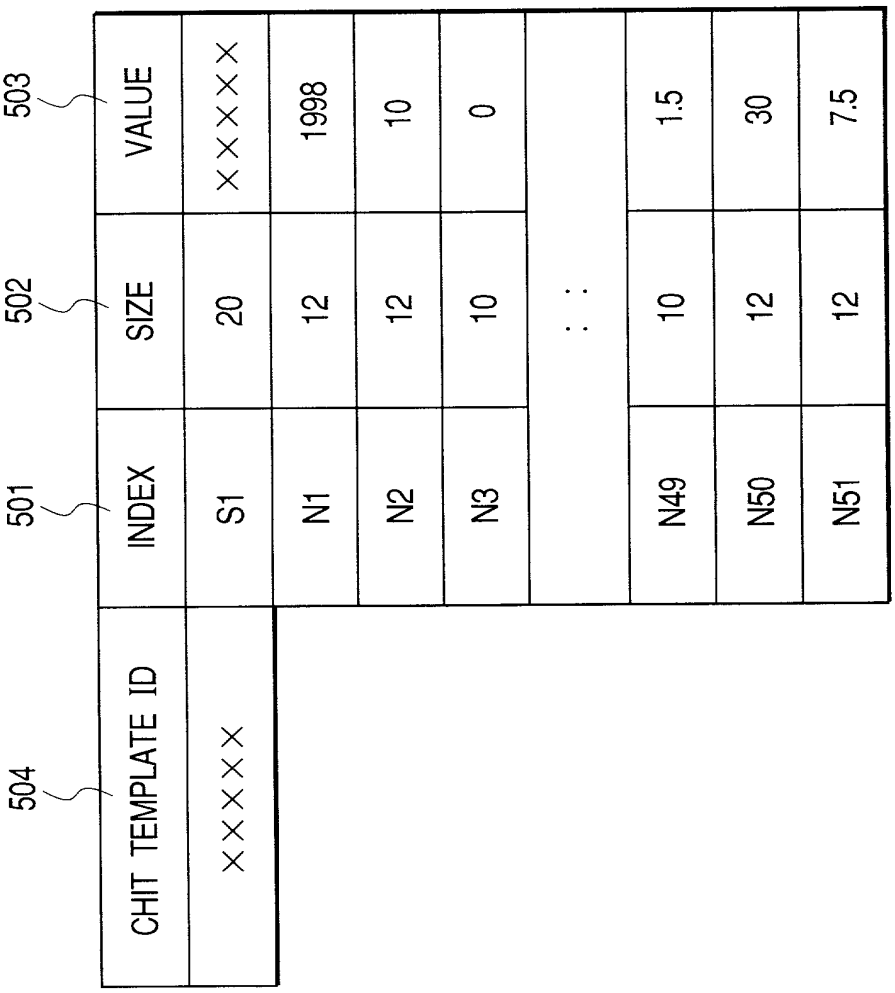
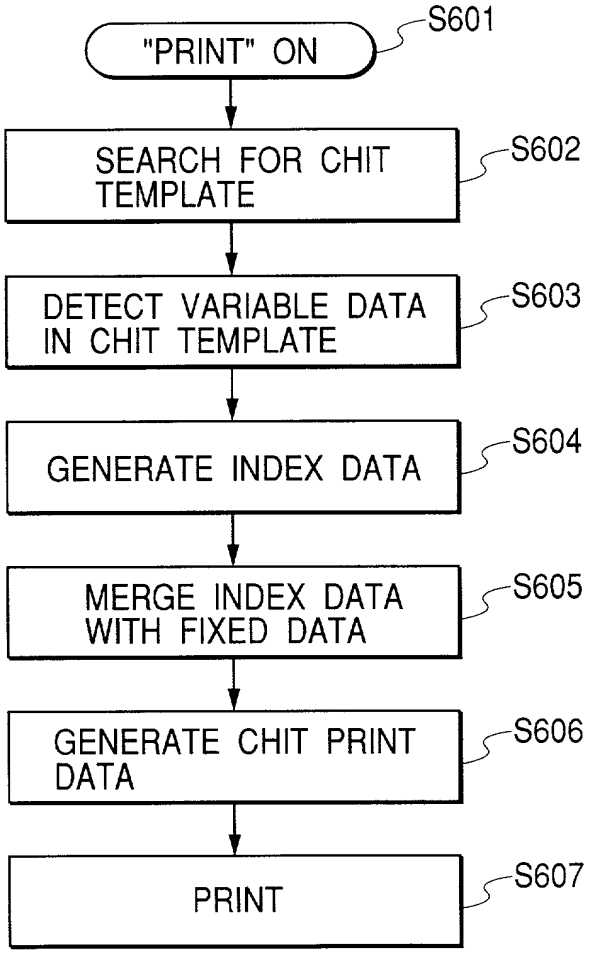
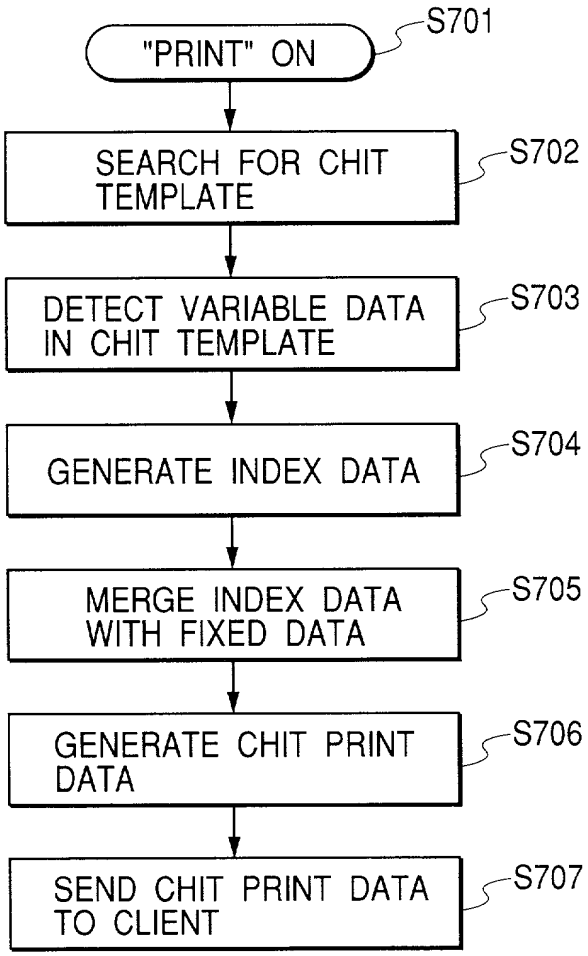

504
501
502
503
CHIT TEMPLATE ID
INDEX
SIZE
VALUE
××××××
S1
20
××××××
N1
12
1998
N2
12
10
N3
10
0
N49
10
1.5
N50
12
30
N51
12
7.5

FIG. 6



EP 2 296 365 A1

FIG. 7



EP 0 954 165 A1

FIG. 8

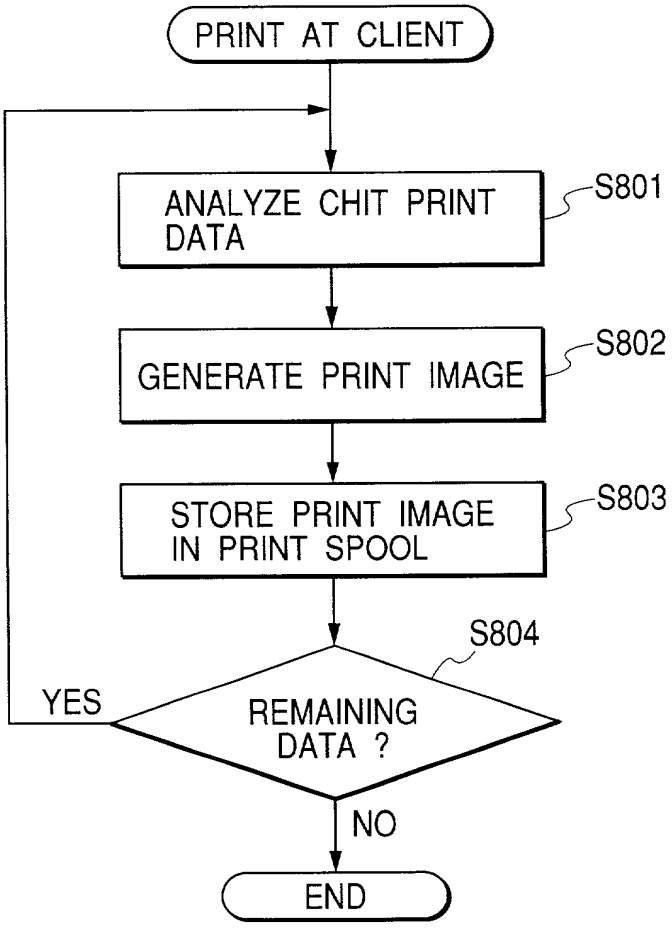

PRINT AT CLIENT
ANALYZE CHIT PRINT DATA
S801
GENERATE PRINT IMAGE
S802
STORE PRINT IMAGE IN PRINT SPOOL
S803
S804
REMAINING DATA ?
YES
NO
END

FIG. 9

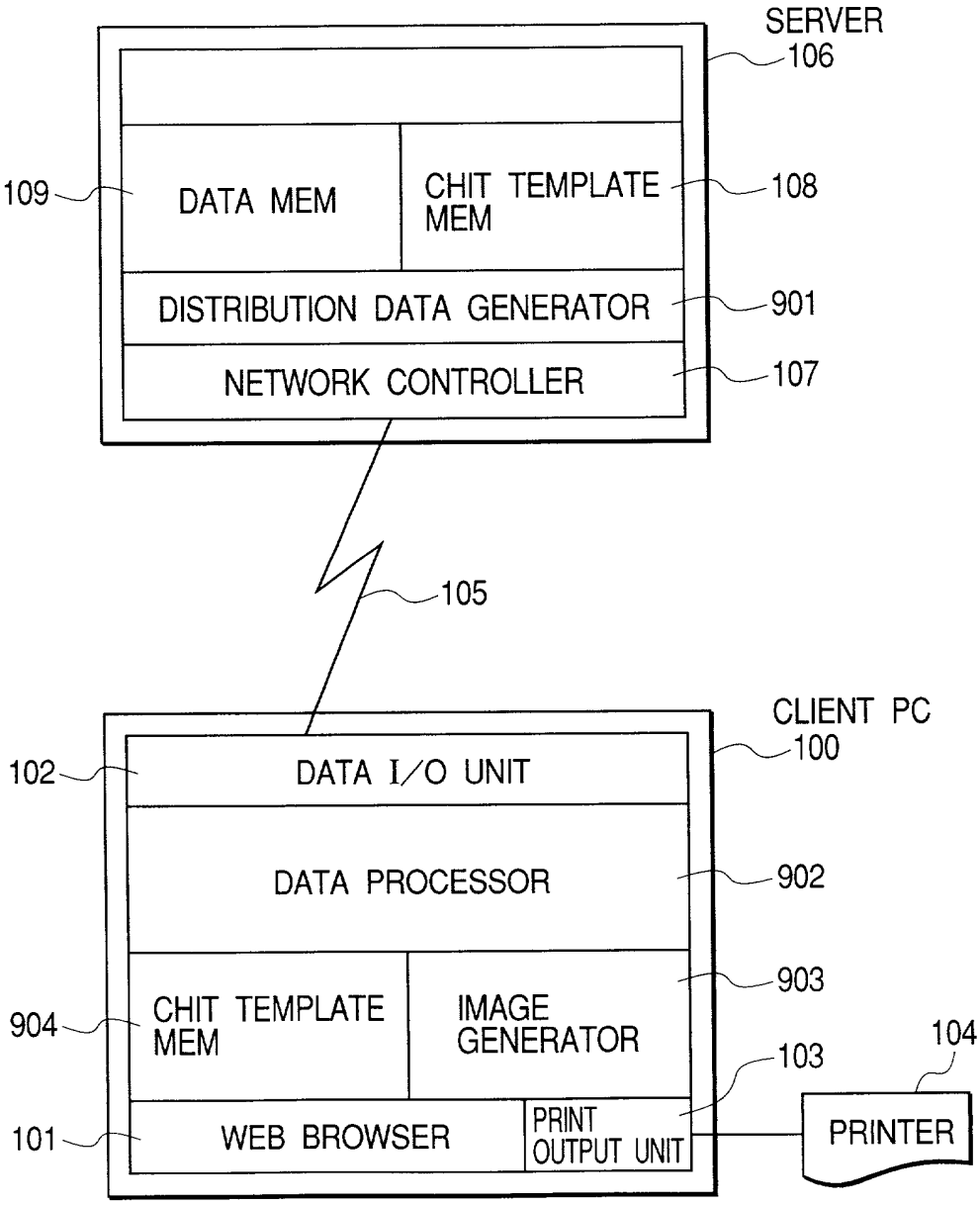
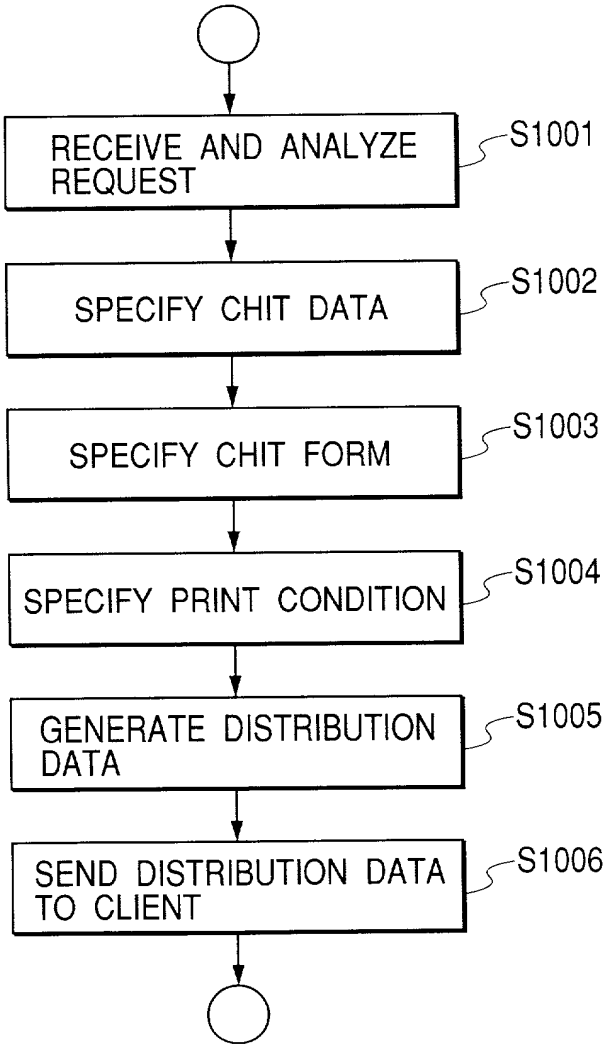

SERVER
106
109
DATA MEM
CHIT TEMPLATE MEM
108
DISTRIBUTION DATA GENERATOR
901
NETWORK CONTROLLER
107
105
CLIENT PC
100
102
DATA I/O UNIT
DATA PROCESSOR
902
903
904
CHIT TEMPLATE MEM
IMAGE GENERATOR
104
103
101
WEB BROWSER
PRINT OUTPUT UNIT
PRINTER

FIG. 10



US 2004/0205465 A1 Oct. 14, 2004

FIG. 11

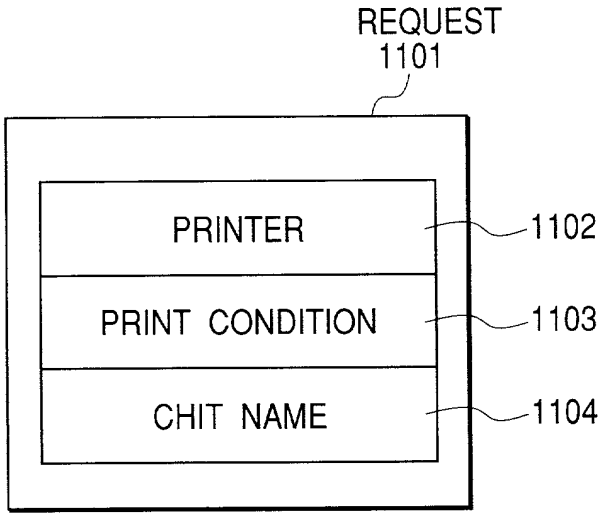

REQUEST
1101
PRINTER
1102
PRINT CONDITION
1103
CHIT NAME
1104

FIG. 12

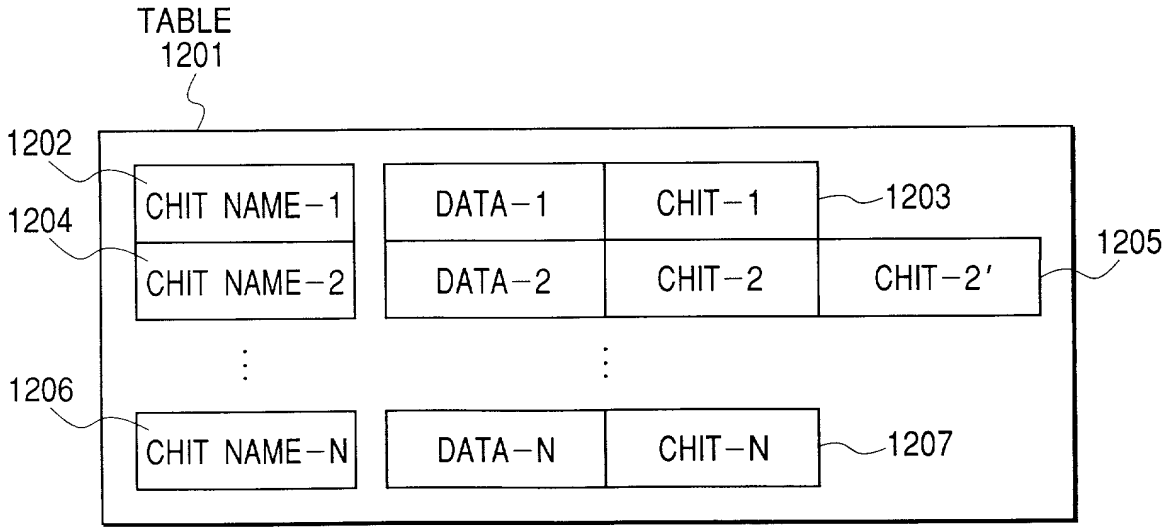


TABLE
1201
1202
CHIT NAME-1
DATA-1
CHIT-1
1203
1204
CHIT NAME-2
DATA-2
CHIT-2
CHIT-2'
1205
1206
CHIT NAME-N
DATA-N
CHIT-N
1207

FIG. 13

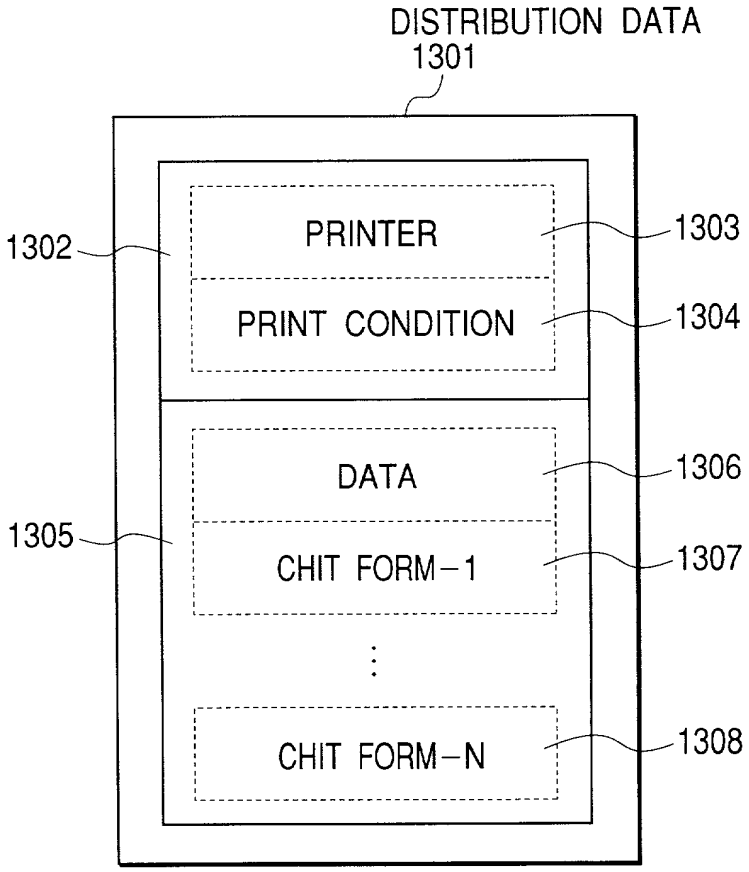
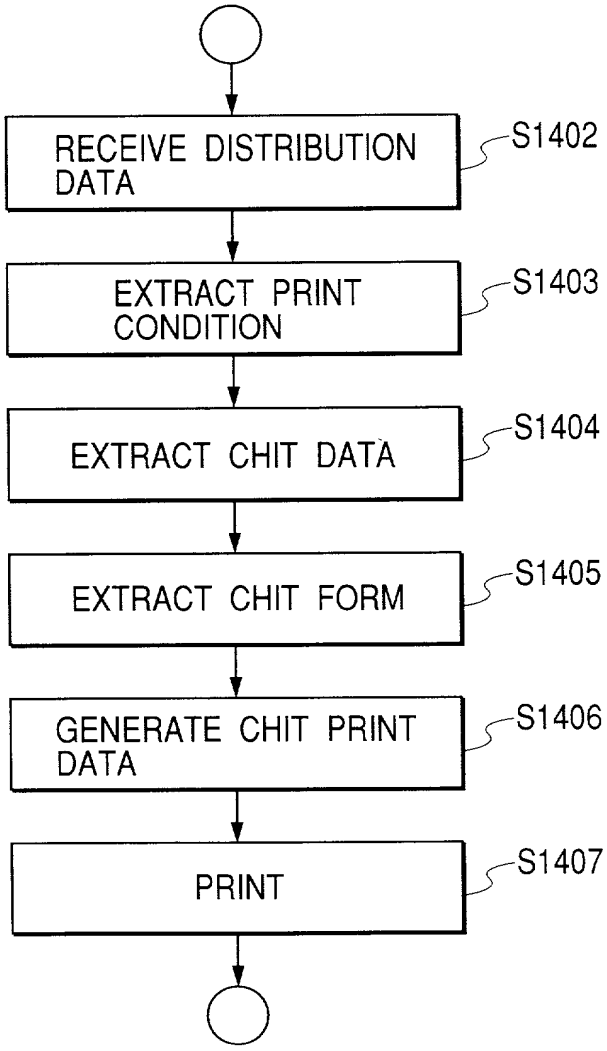
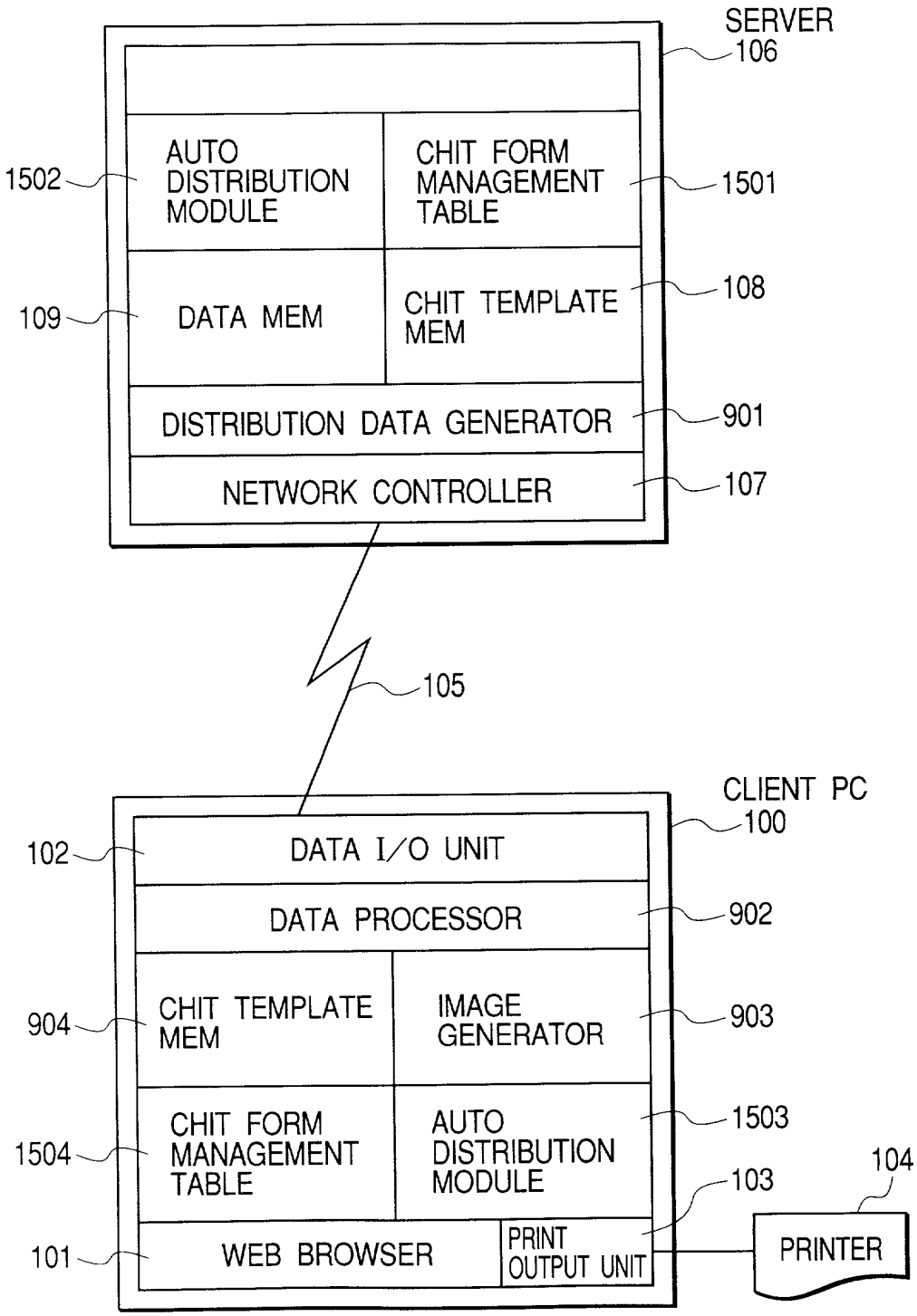

DISTRIBUTION DATA
1301
1302
PRINTER
1303
PRINT CONDITION
1304
1305
DATA
1306
CHIT FORM-1
1307
CHIT FORM-N
1308

FIG. 14



JP2004-145804

FIG. 15


SERVER
106
AUTO DISTRIBUTION MODULE
1502
CHIT FORM MANAGEMENT TABLE
1501
DATA MEM
109
CHIT TEMPLATE MEM
108
DISTRIBUTION DATA GENERATOR
901
NETWORK CONTROLLER
107
105
CLIENT PC
100
DATA I/O UNIT
102
DATA PROCESSOR
902
CHIT TEMPLATE MEM
904
IMAGE GENERATOR
903
CHIT FORM MANAGEMENT TABLE
1504
AUTO DISTRIBUTION MODULE
1503
WEB BROWSER
101
PRINT OUTPUT UNIT
103
PRINTER
104

JP2021-149605

FIG. 16

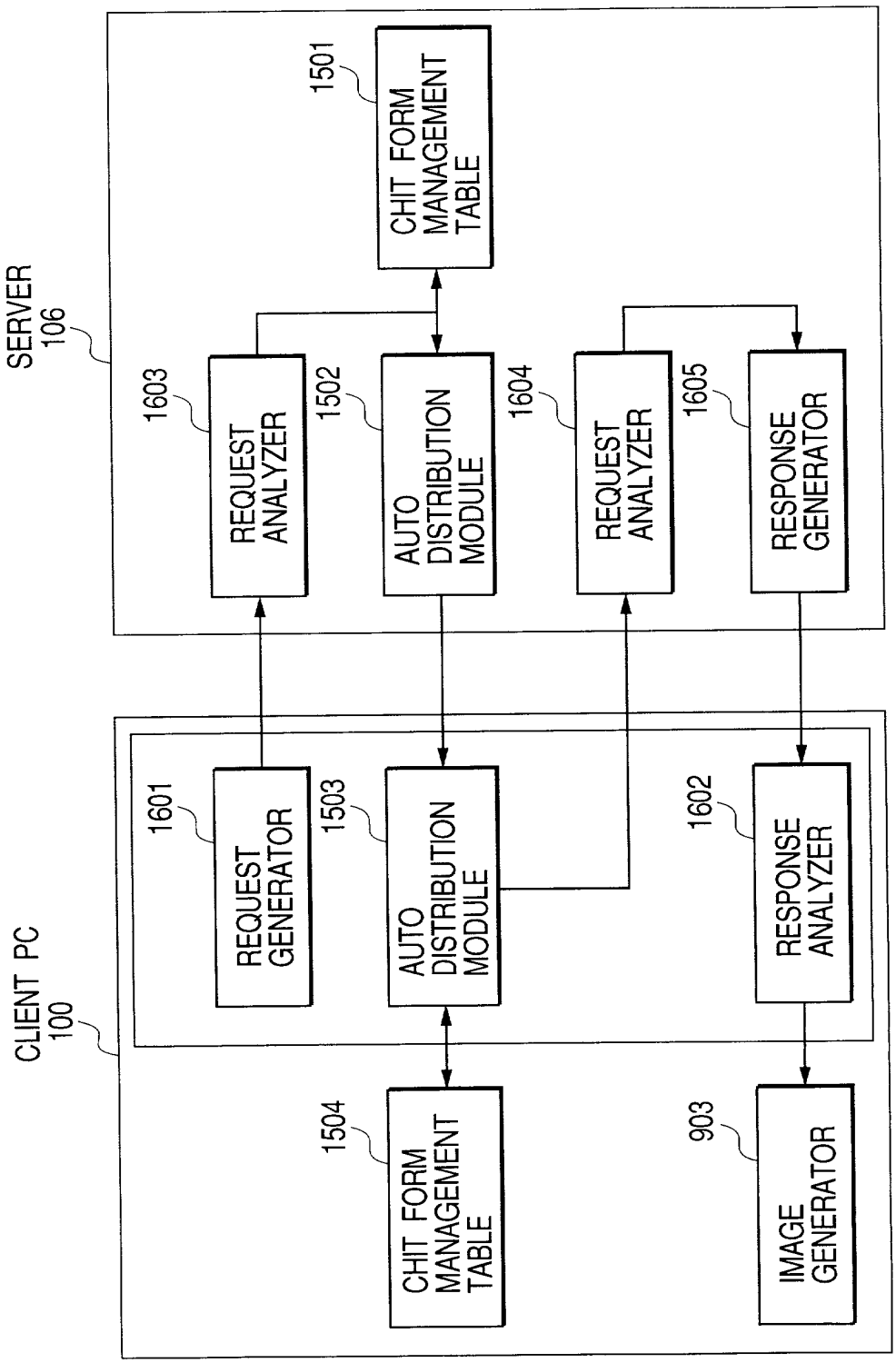
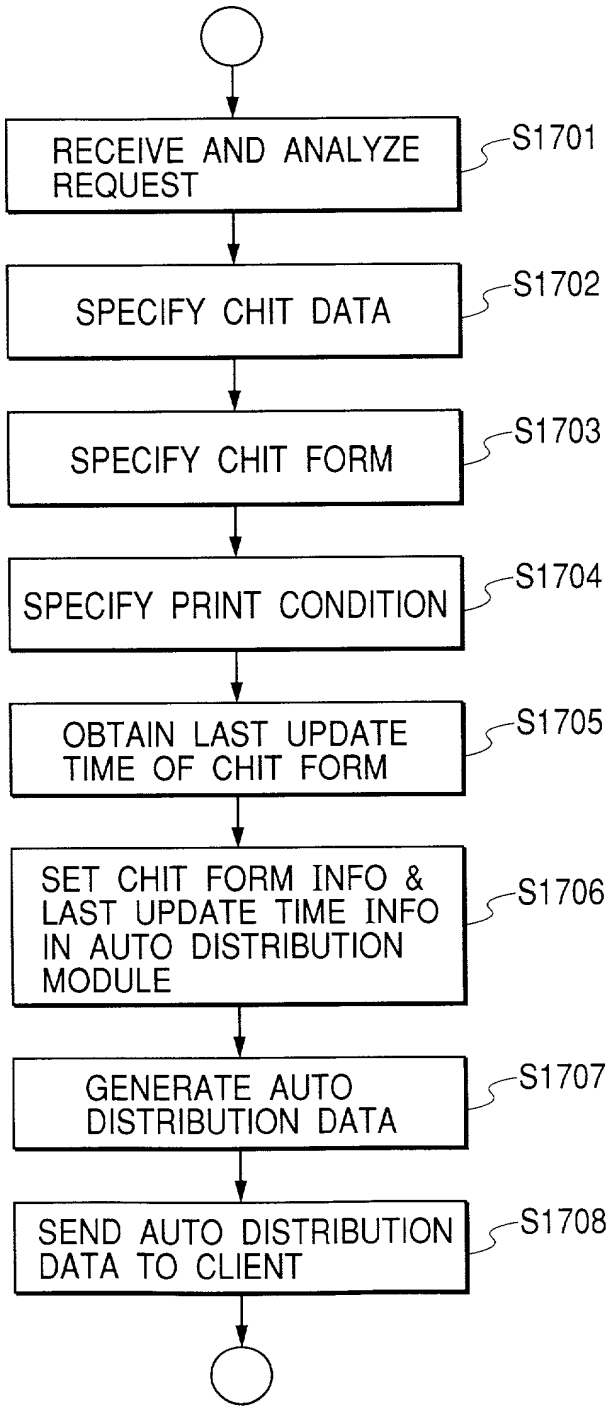


FIG. 17



US 9,946,966 B2

FIG. 18

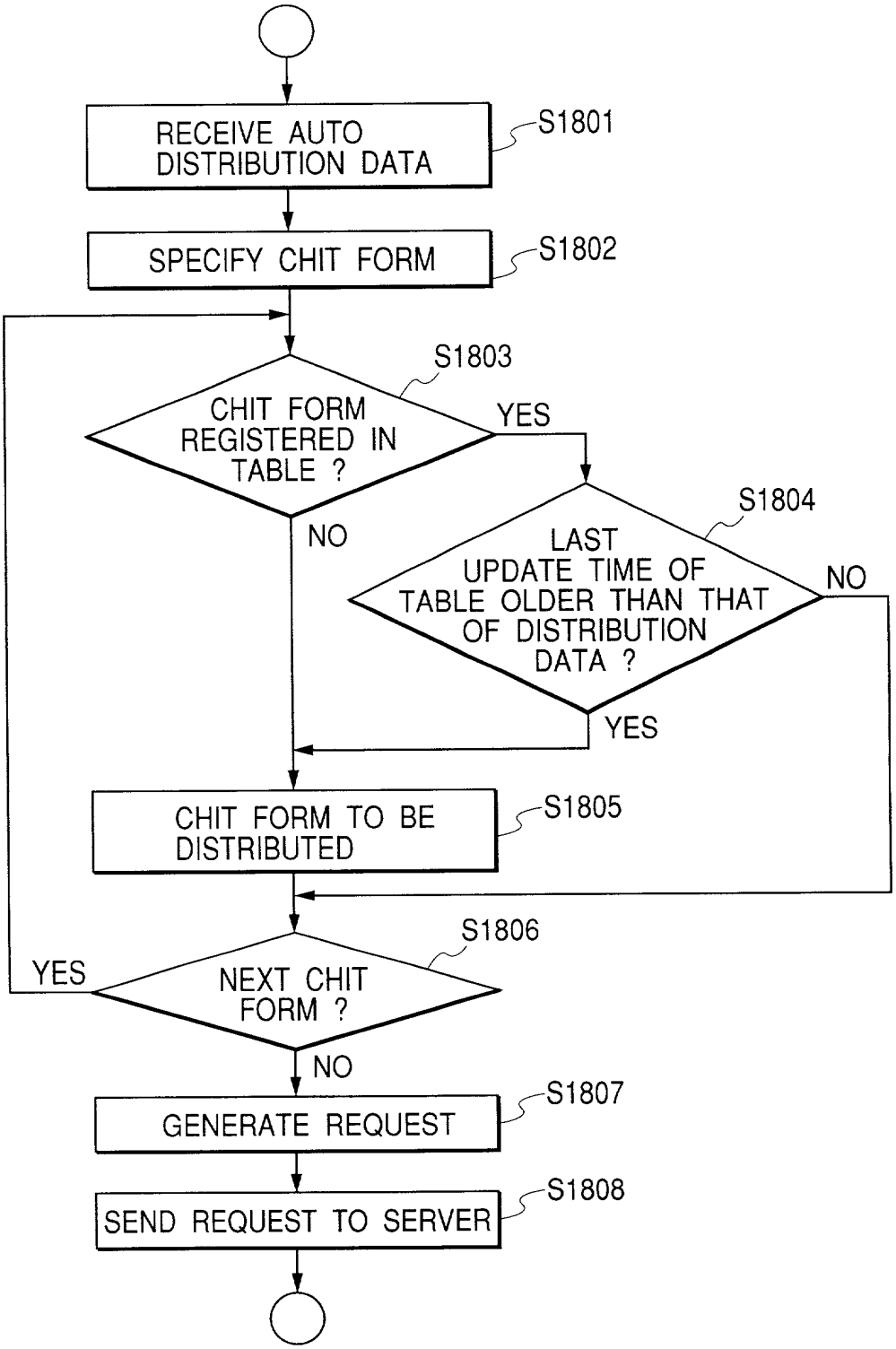

RECEIVE AUTO DISTRIBUTION DATA
S1801
SPECIFY CHIT FORM
S1802
S1803
CHIT FORM REGISTERED IN TABLE ?
YES
NO
S1804
LAST UPDATE TIME OF TABLE OLDER THAN THAT OF DISTRIBUTION DATA ?
NO
YES
CHIT FORM TO BE DISTRIBUTED
S1805
S1806
NEXT CHIT FORM ?
YES
NO
GENERATE REQUEST
S1807
SEND REQUEST TO SERVER
S1808

FIG. 19

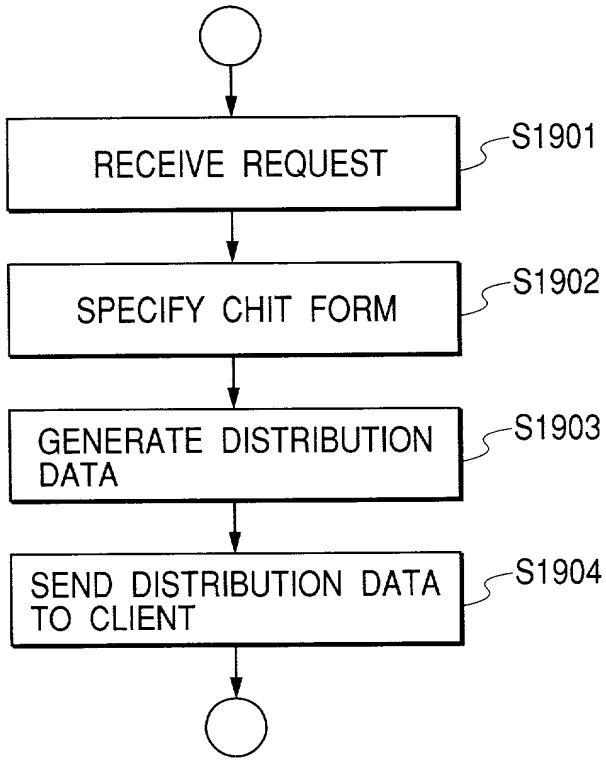
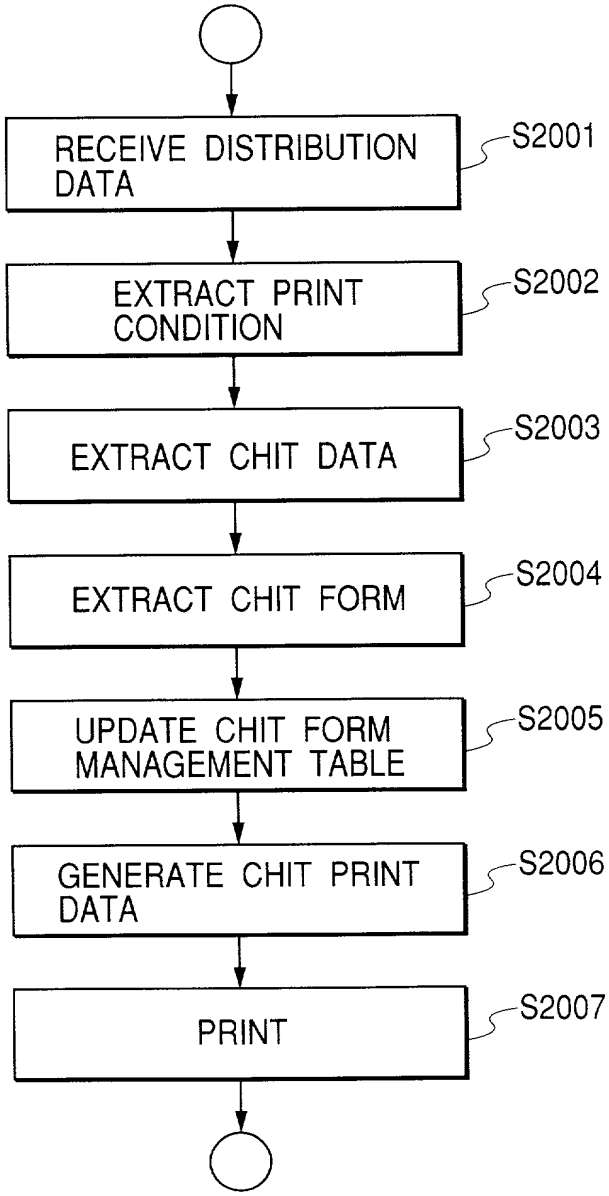

RECEIVE REQUEST
S1901
SPECIFY CHIT FORM
S1902
GENERATE DISTRIBUTION DATA
S1903
SEND DISTRIBUTION DATA TO CLIENT
S1904

FIG. 20



JP2005-346264

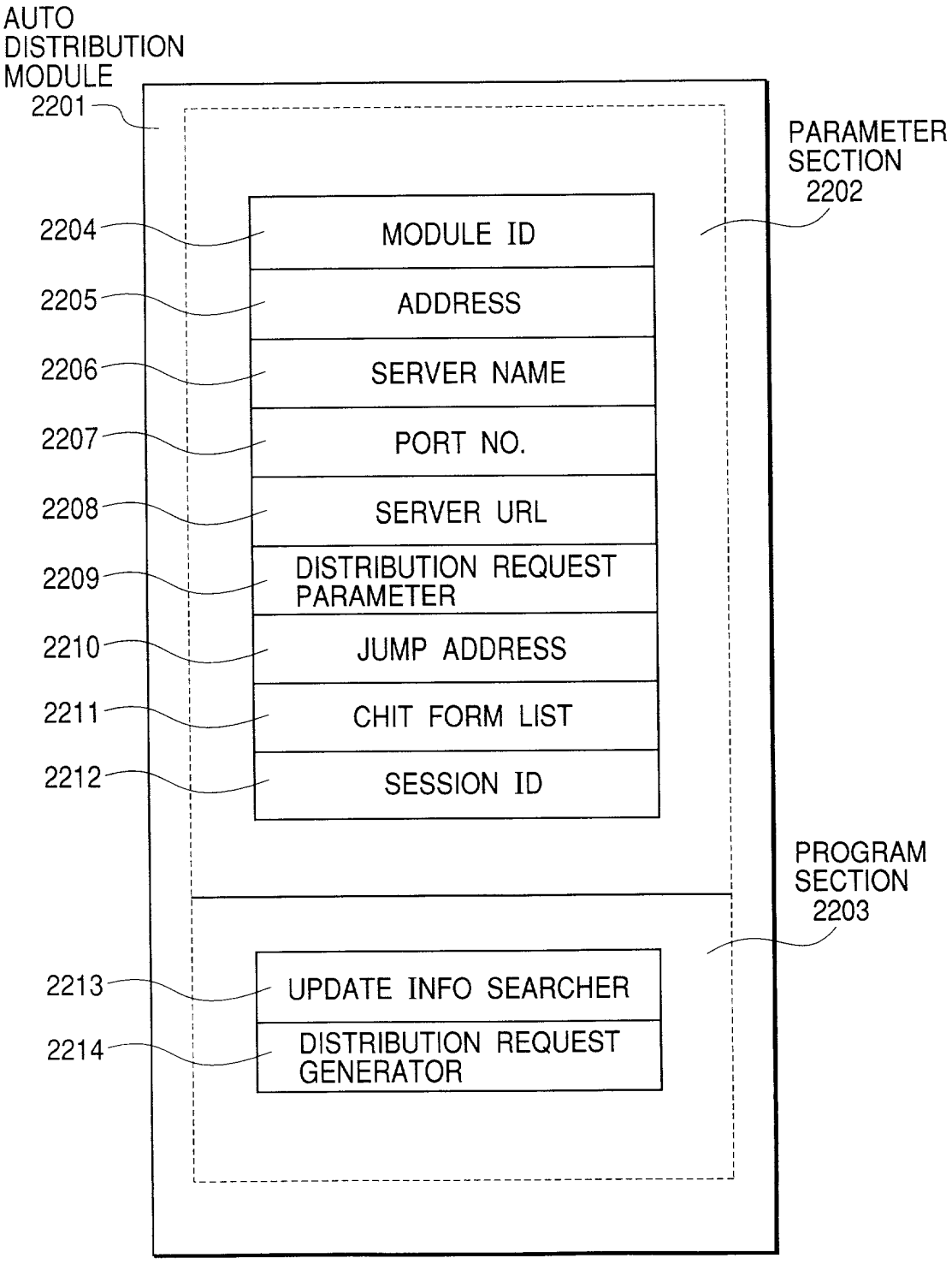
Robert Bosch

FIG. 21

	2102 DISTRIBUTION DATA SIZE WITH CHIT FORM (KB)	2103 DISTRIBUTION DATA SIZE WITHOUT CHIT FORM (KB)	2104 RATIO (%)
CHIT-A	9.0	0.5	5.56
CHIT-B	14.4	0.7	4.86
CHIT-C	25.0	0.7	2.8
CHIT-D	712.7	0.3	0.04
CHIT-E	119.0	0.5	0.4

2101

FIG. 22



09041265 - 112804

FIG. 23

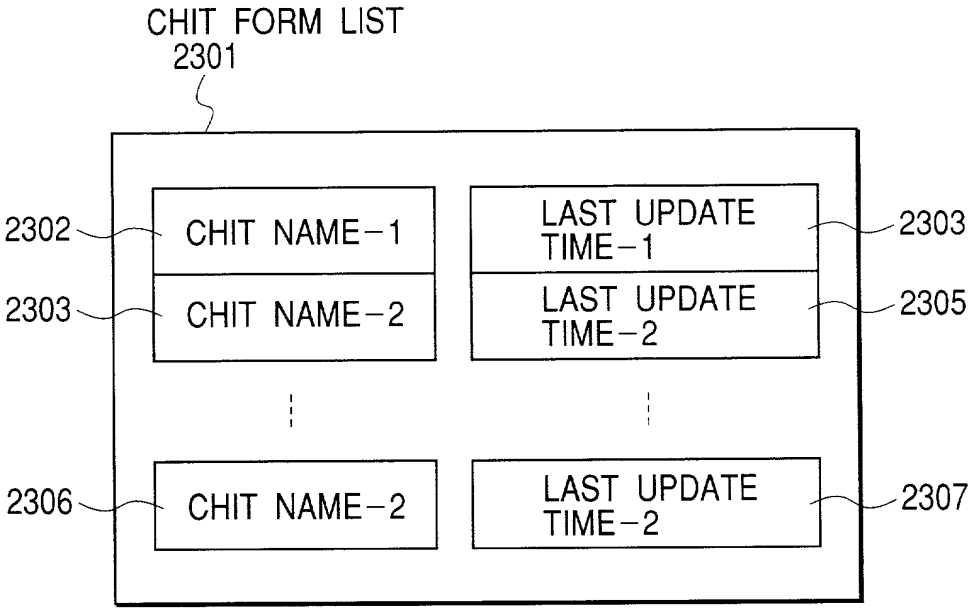
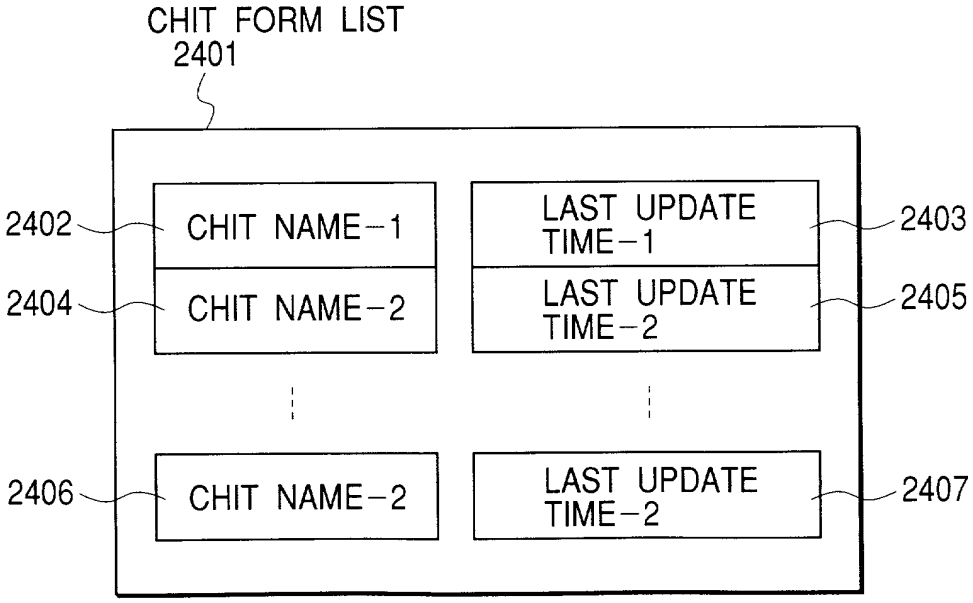


FIG. 24



09/04/05, EAST Version: 2.1.0.14

FIG. 25

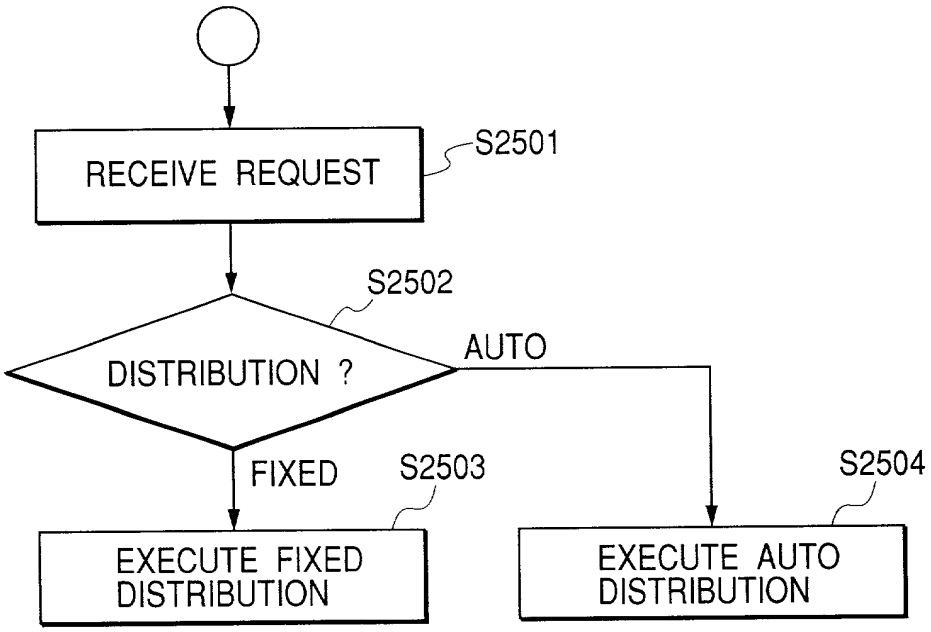
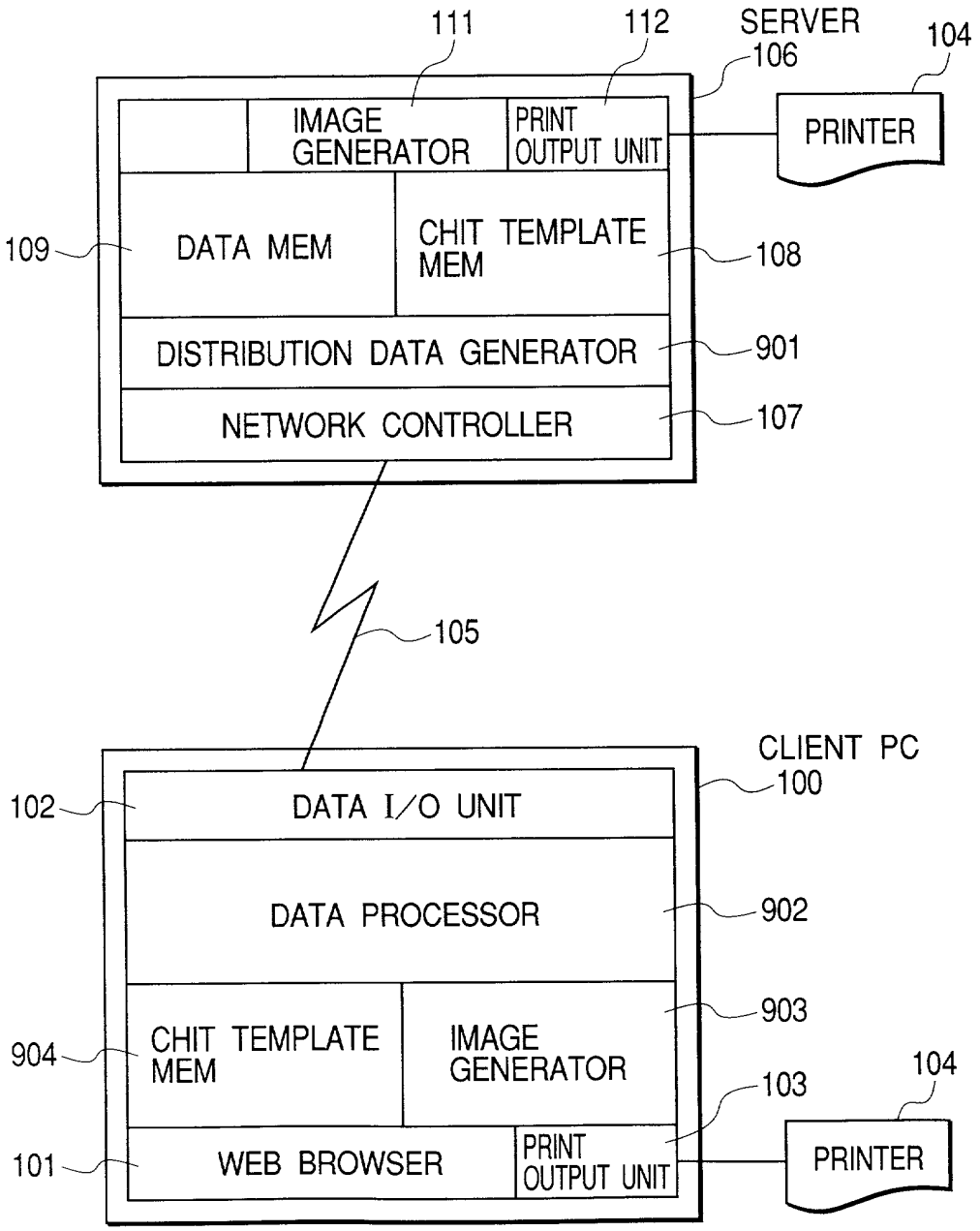

RECEIVE REQUEST
S2501
S2502
DISTRIBUTION ?
AUTO
FIXED
S2503
S2504
EXECUTE FIXED DISTRIBUTION
EXECUTE AUTO DISTRIBUTION

FIG. 26



US 2004/0205655 A1 Oct. 14, 2004

FIG. 27

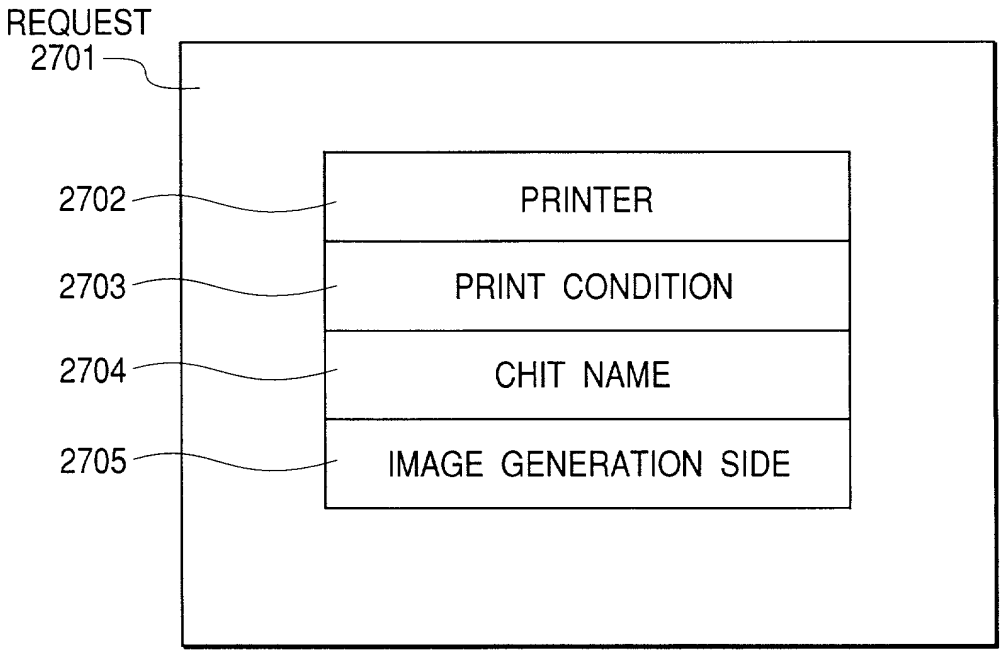

REQUEST
2701
2702
PRINTER
2703
PRINT CONDITION
2704
CHIT NAME
2705
IMAGE GENERATION SIDE

FIG. 28

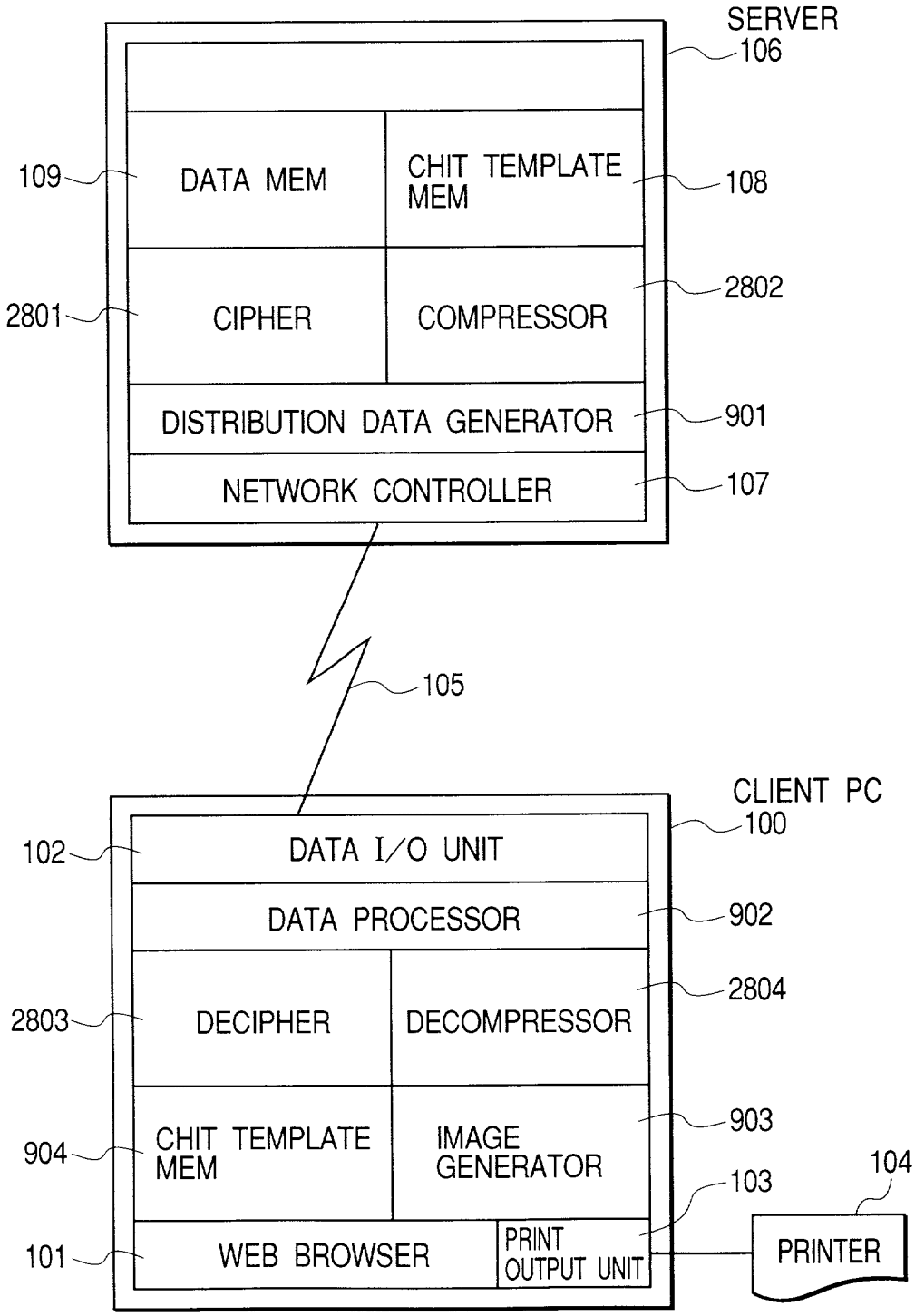

SERVER
106
DATA MEM
109
CHIT TEMPLATE MEM
108
CIPHER
2801
COMPRESSOR
2802
DISTRIBUTION DATA GENERATOR
901
NETWORK CONTROLLER
107
105
CLIENT PC
100
DATA I/O UNIT
102
DATA PROCESSOR
902
DECIPHER
2803
DECOMPRESSOR
2804
CHIT TEMPLATE MEM
904
IMAGE GENERATOR
903
WEB BROWSER
101
PRINT OUTPUT UNIT
103
PRINTER
104

FIG. 29

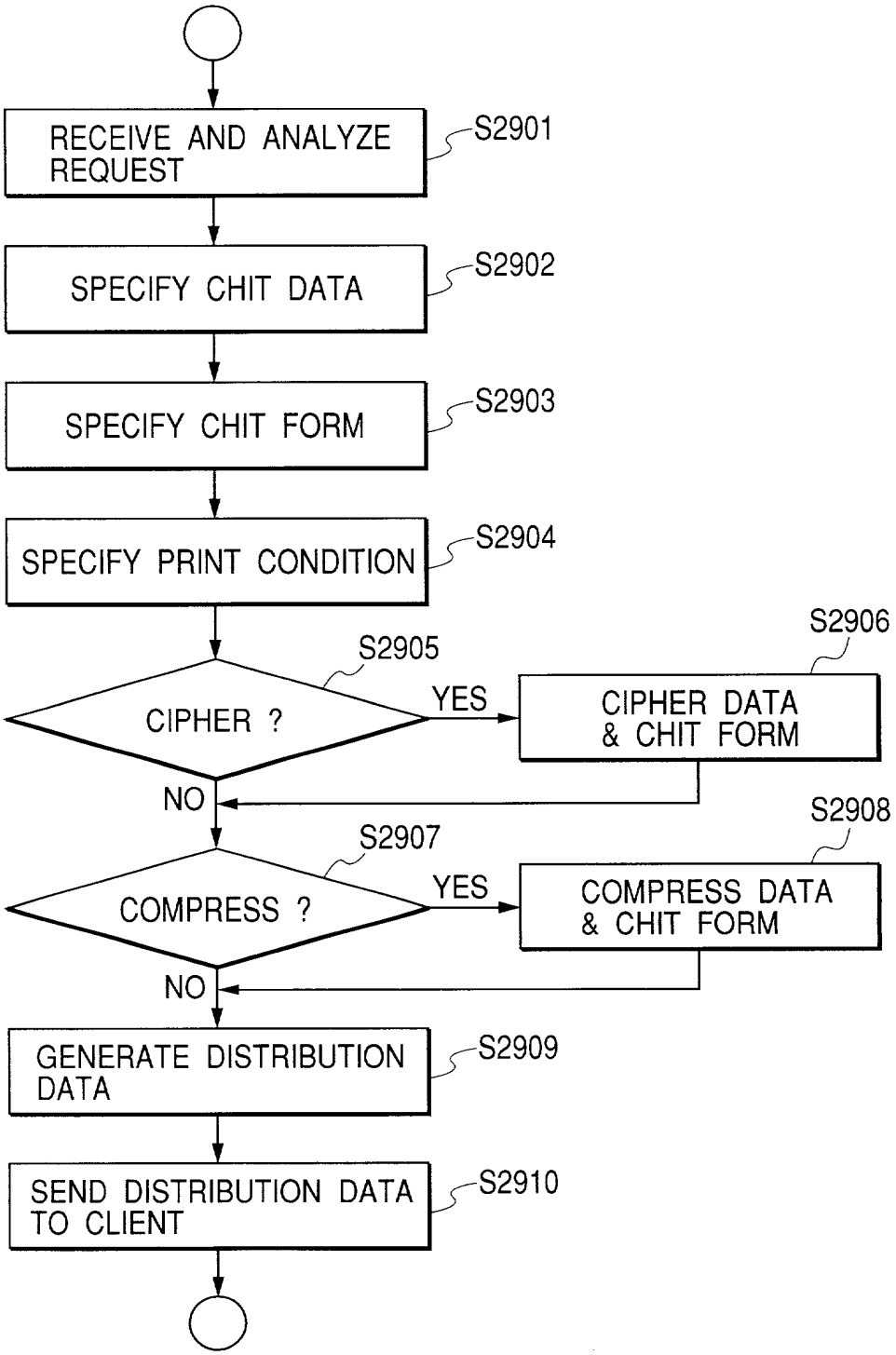

RECEIVE AND ANALYZE REQUEST
S2901
SPECIFY CHIT DATA
S2902
SPECIFY CHIT FORM
S2903
SPECIFY PRINT CONDITION
S2904
CIPHER ?
S2905
YES
CIPHER DATA & CHIT FORM
S2906
NO
COMPRESS ?
S2907
YES
COMPRESS DATA & CHIT FORM
S2908
NO
GENERATE DISTRIBUTION DATA
S2909
SEND DISTRIBUTION DATA TO CLIENT
S2910

FIG. 30

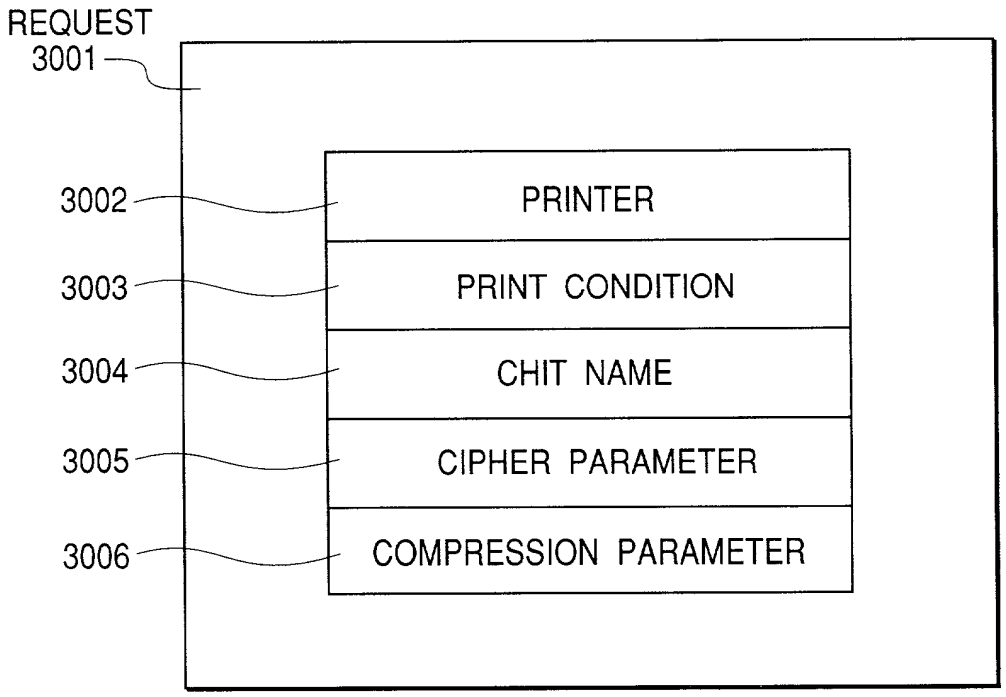

REQUEST
3001
3002
PRINTER
3003
PRINT CONDITION
3004
CHIT NAME
3005
CIPHER PARAMETER
3006
COMPRESSION PARAMETER

FIG. 31

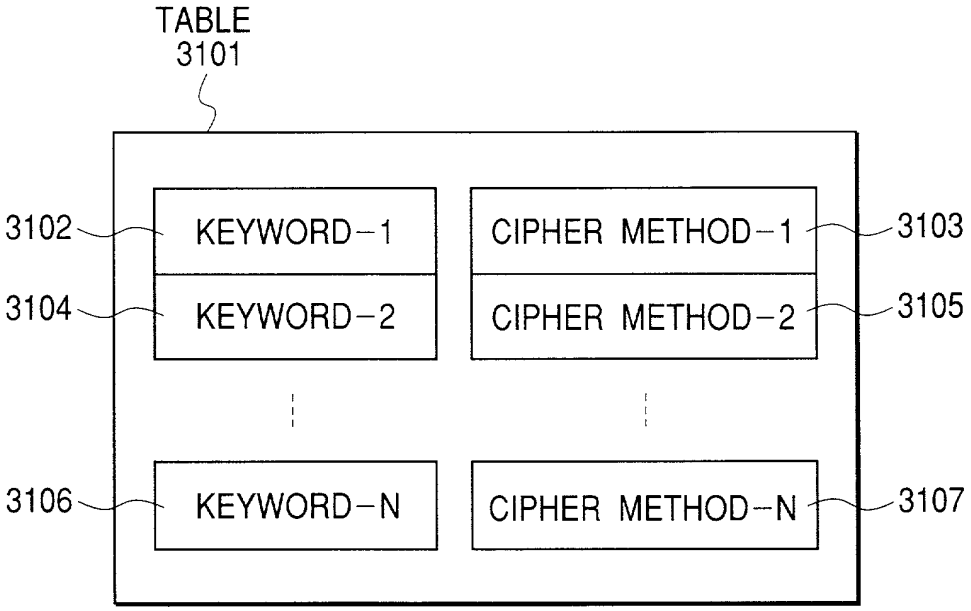
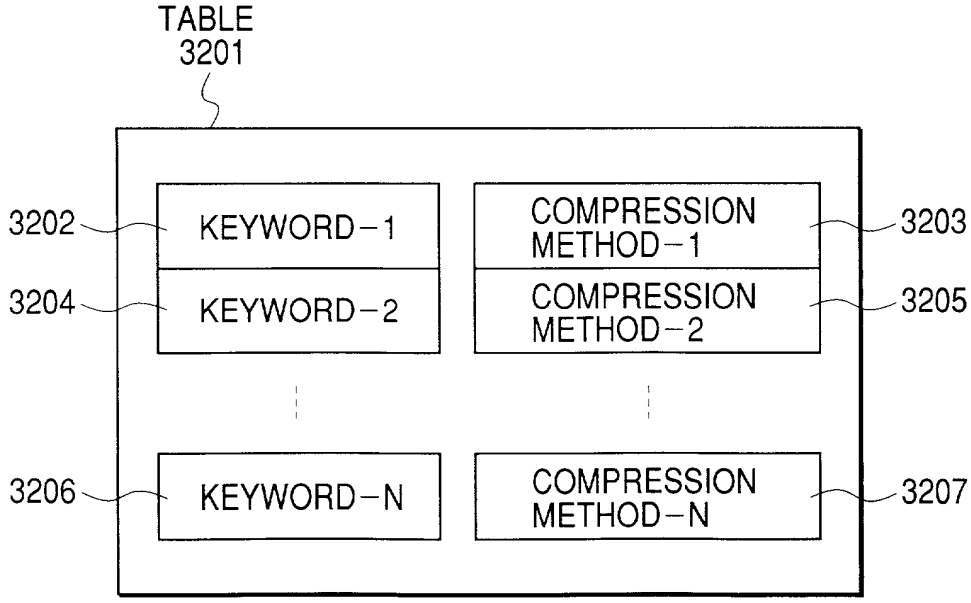


FIG. 32



US 9,294,265 B2

FIG. 33

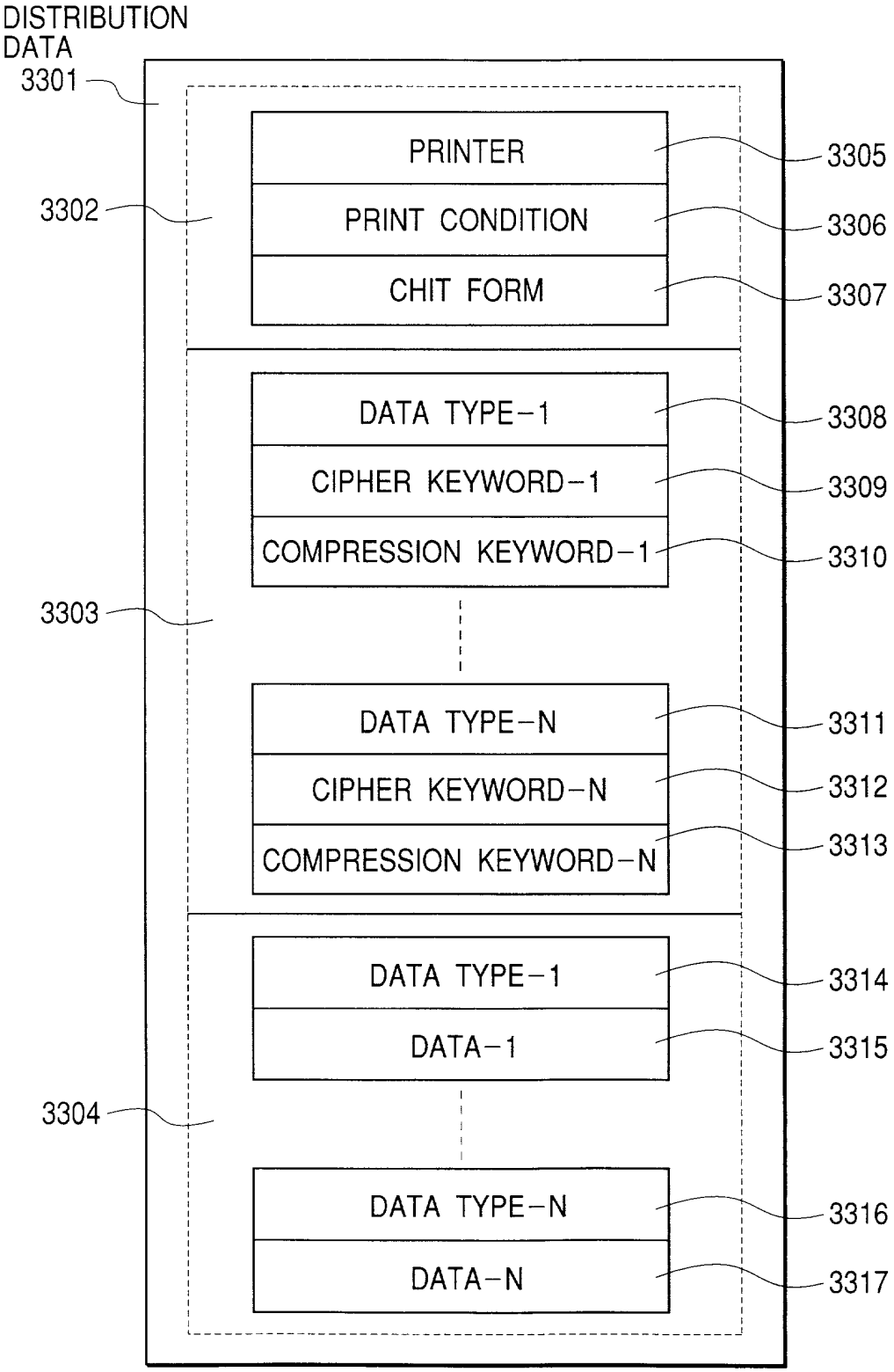
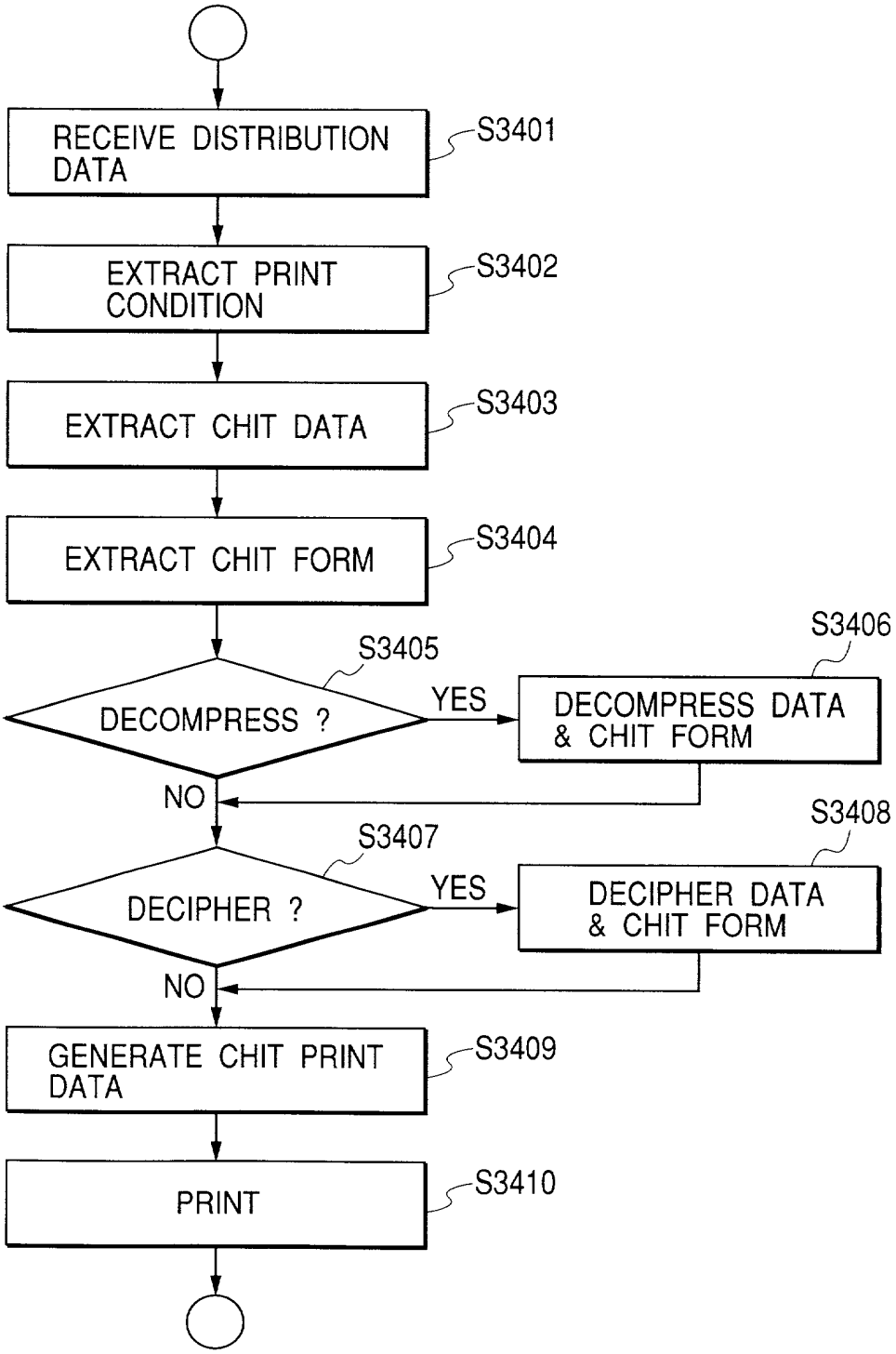

DISTRIBUTION DATA
3301
3302
3303
3304
PRINTER
PRINT CONDITION
CHIT FORM
DATA TYPE-1
CIPHER KEYWORD-1
COMPRESSION KEYWORD-1
DATA TYPE-N
CIPHER KEYWORD-N
COMPRESSION KEYWORD-N
DATA TYPE-1
DATA-1
DATA TYPE-N
DATA-N
3305
3306
3307
3308
3309
3310
3311
3312
3313
3314
3315
3316
3317

FIG. 34



0094965 - 4420A

FIG. 35

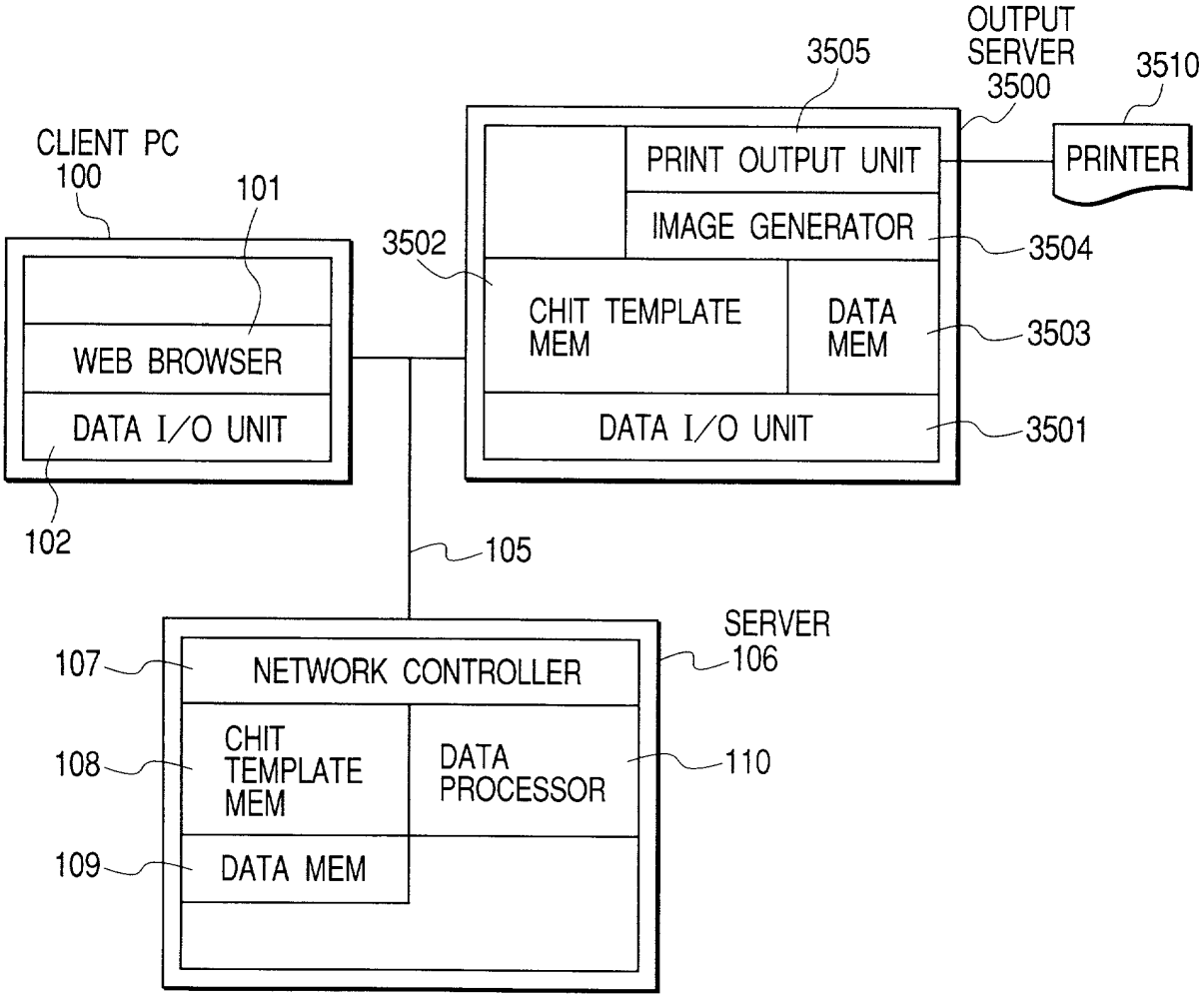
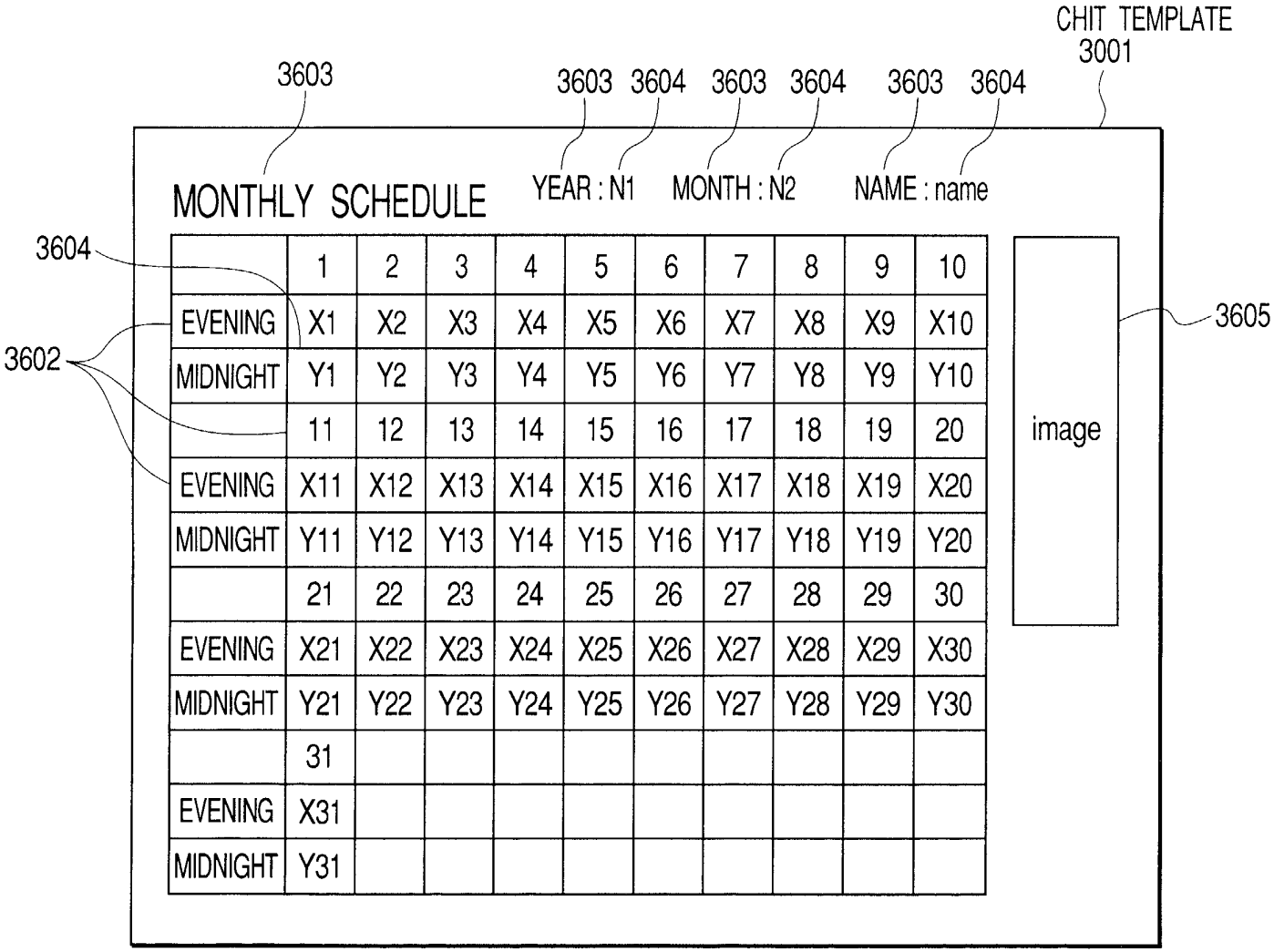

OUTPUT SERVER
3500
3505
3510
CLIENT PC
100
101
PRINT OUTPUT UNIT
PRINTER
IMAGE GENERATOR
3502
3504
CHIT TEMPLATE MEM
DATA MEM
3503
WEB BROWSER
DATA I/O UNIT
3501
102
105
SERVER
106
107
NETWORK CONTROLLER
108
CHIT TEMPLATE MEM
DATA PROCESSOR
110
109
DATA MEM

FIG. 36



	1	2	3	4	5	6	7	8	9	10
EVENING	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
MIDNIGHT	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
	11	12	13	14	15	16	17	18	19	20
EVENING	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
MIDNIGHT	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
	21	22	23	24	25	26	27	28	29	30
EVENING	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30
MIDNIGHT	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
	31									
EVENING	X31									
MIDNIGHT	Y31									

FIG. 37

3701	3702
INDEX	VALUE
N1	1999
N2	10
name	TANAKA
X1	1
Y1	0
X2	1
Y2	0
⋮	
X30	1
Y30	1
X31	0
Y31	0
image	CA.jpg

JP 2004-295465 A 2004.10.21

TOSHIBA

FIG. 38

MONTHLY SCHEDULE YEAR : 1999 MONTH : 10 NAME : TANAKA

	1	2	3	4	5	6	7	8	9	10
EVENING	1	1	0	0	0	0	0	0	0	0
MIDNIGHT	0	0	0	0	0	0	0	0	0	0
	11	12	13	14	15	16	17	18	19	20
EVENING	0	0	0	0	0	0	0	0	0	0
MIDNIGHT	0	0	0	0	0	0	0	0	0	0
	21	22	23	24	25	26	27	28	29	30
EVENING	0	0	0	0	0	0	0	0	0	0
MIDNIGHT	0	0	0	0	0	0	0	0	0	0
	31									
EVENING	1									
MIDNIGHT	1									

Ca

3801

FIG. 39

DATA A

```
CHIT TEMPLATE=MONTHLY SCHEDULE
N1=1999
N2=10
name=TANAKA
X1=1
Y1=0
X2=1
Y2=0
 :
 :
CHIT TEMPLATE DATA
IMAGE DATA
```

DATA B

```
CHIT TEMPLATE=MONTHLY SCHEDULE
N1=1999
N2=10
name=TANAKA
X1=1
Y1=0
X2=1
Y2=0
 :
 :
CHIT TEMPLATE DATA
```

FIG. 40

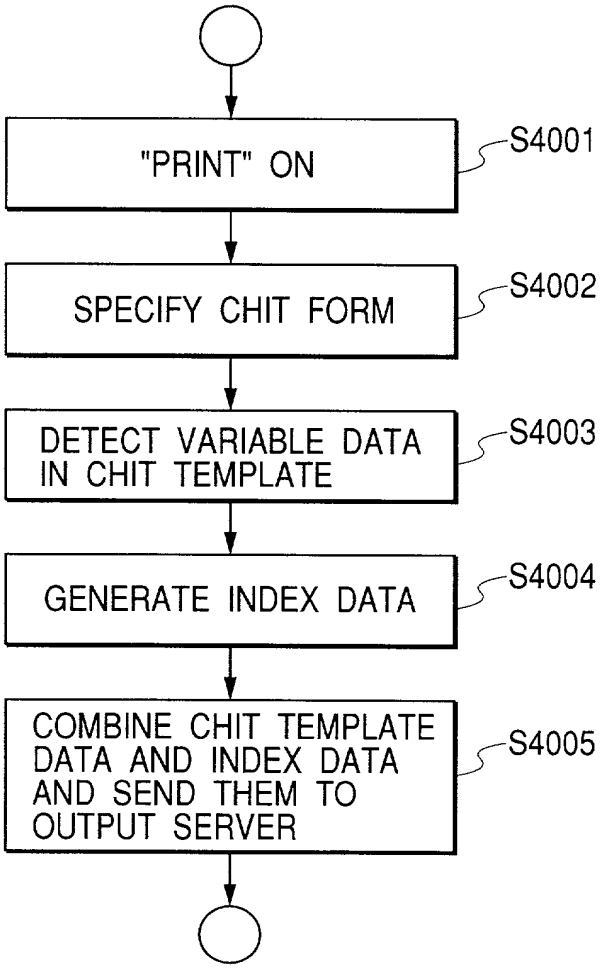
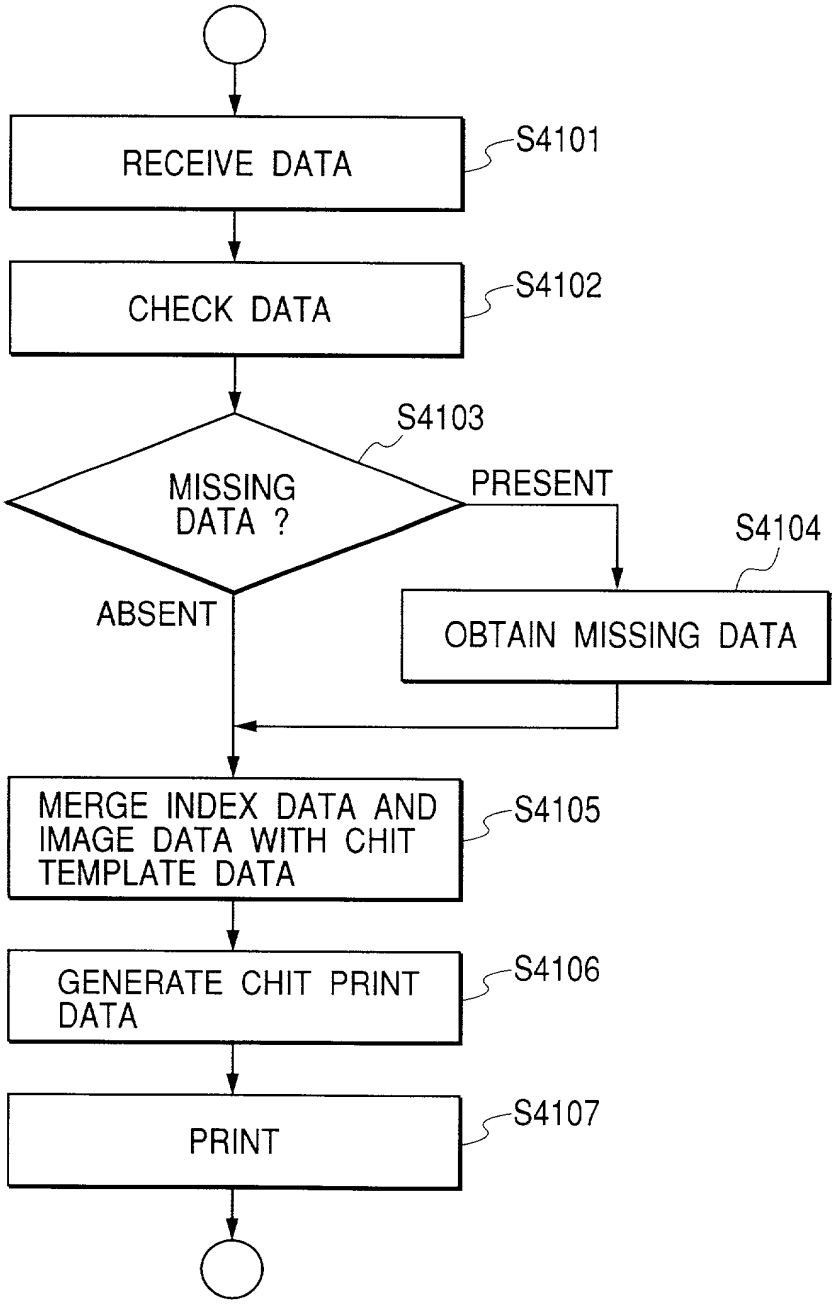

"PRINT" ON
S4001
SPECIFY CHIT FORM
S4002
DETECT VARIABLE DATA IN CHIT TEMPLATE
S4003
GENERATE INDEX DATA
S4004
COMBINE CHIT TEMPLATE DATA AND INDEX DATA AND SEND THEM TO OUTPUT SERVER
S4005

FIG. 41



09/04/2005 14:28:04

FIG. 42

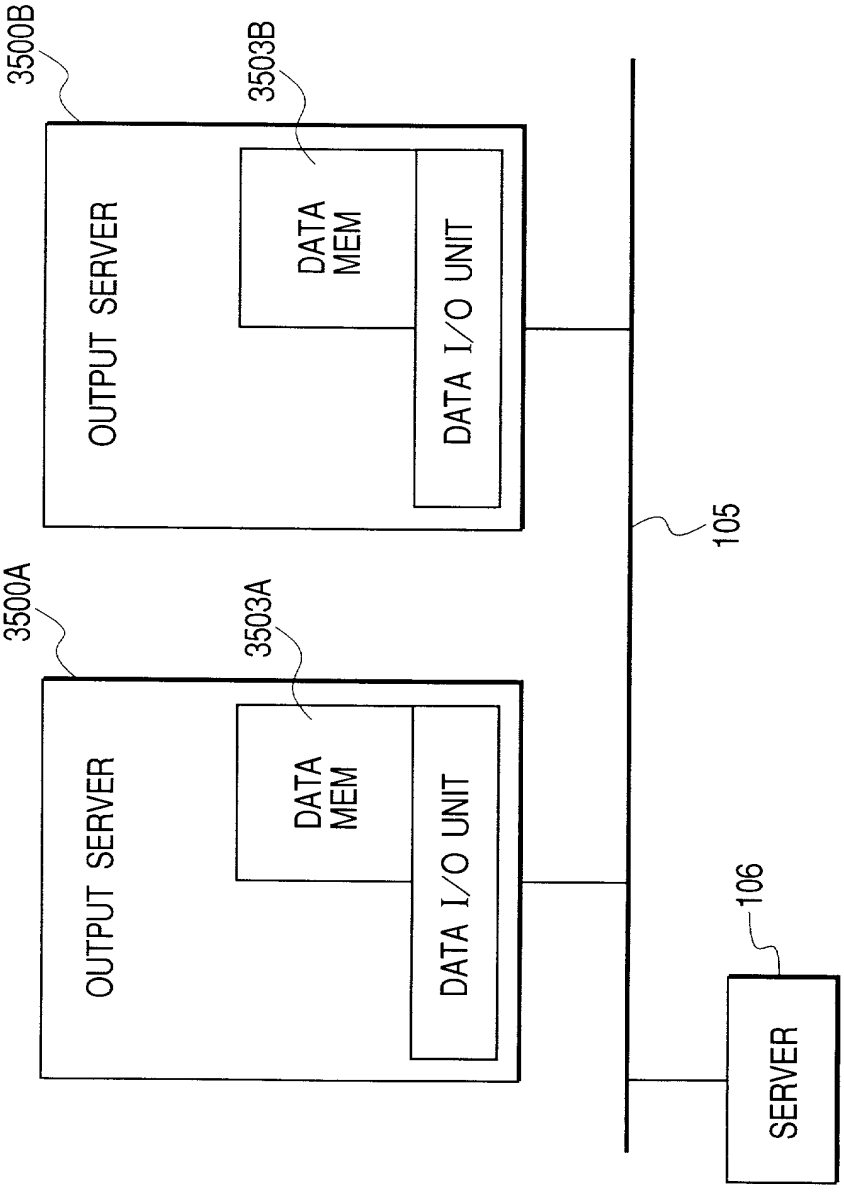
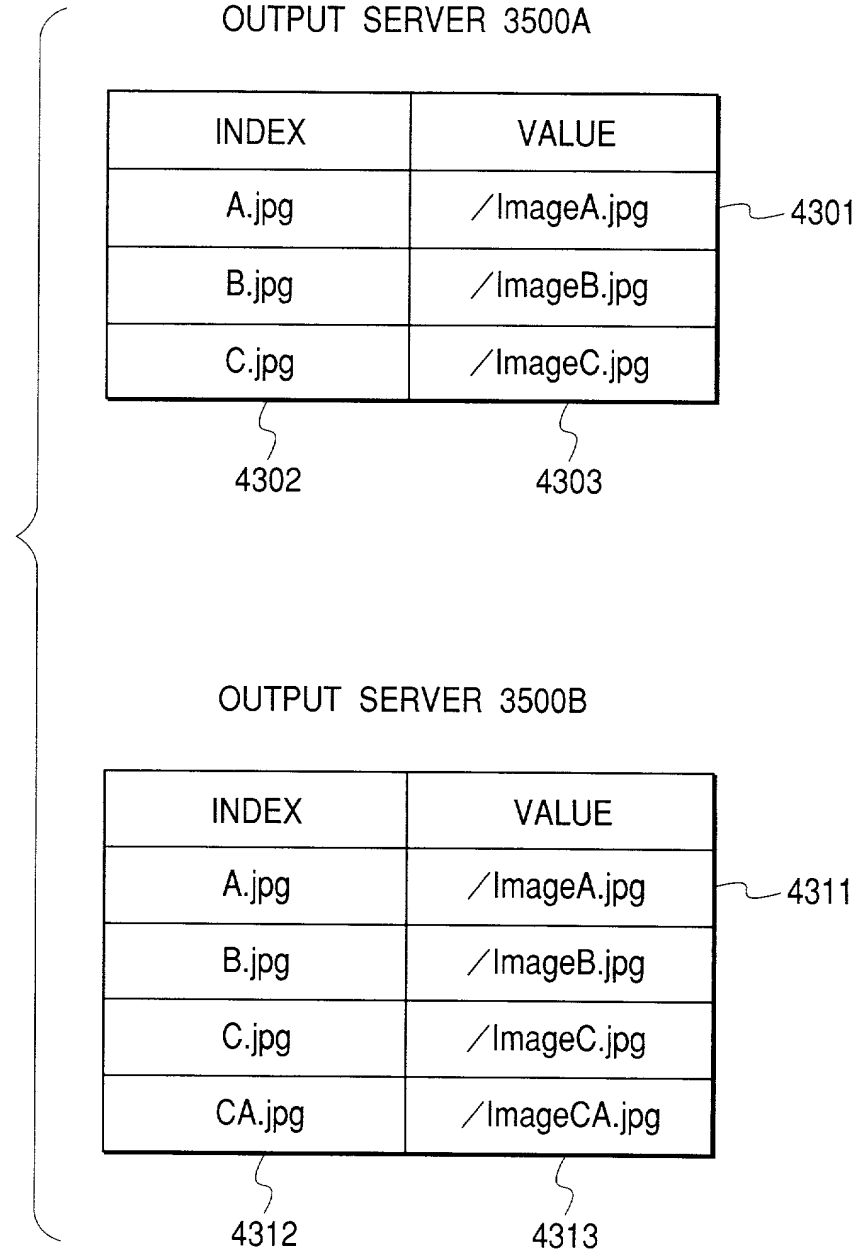

3500B
3503B
OUTPUT SERVER
DATA MEM
DATA I/O UNIT
3500A
3503A
OUTPUT SERVER
DATA MEM
DATA I/O UNIT
105
106
SERVER

FIG. 43



US 2005/0154804 A1

FIG. 44

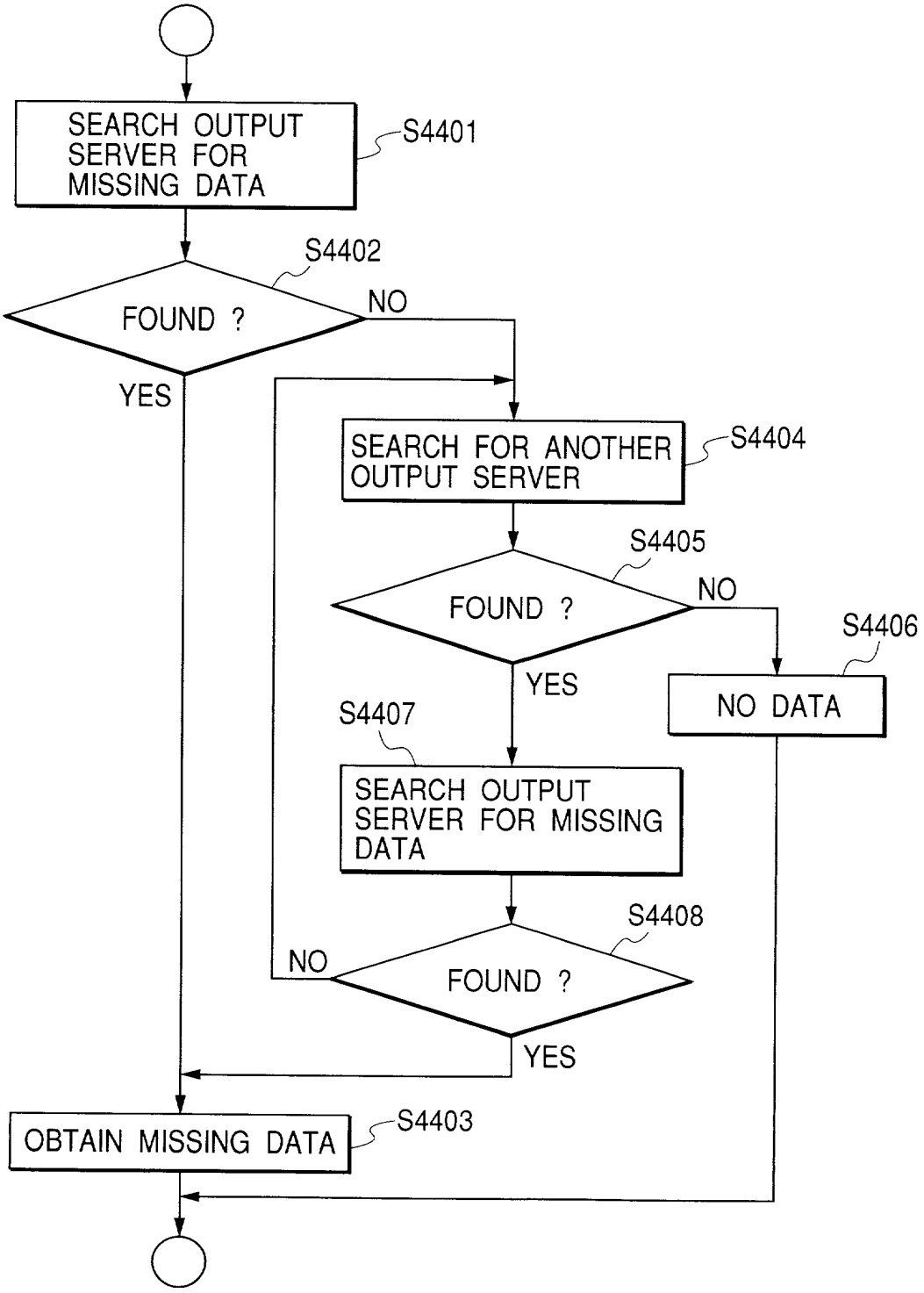

SEARCH OUTPUT SERVER FOR MISSING DATA
S4401
S4402
FOUND ?
NO
YES
SEARCH FOR ANOTHER OUTPUT SERVER
S4404
S4405
FOUND ?
NO
YES
S4406
NO DATA
S4407
SEARCH OUTPUT SERVER FOR MISSING DATA
S4408
NO
FOUND ?
YES
OBTAIN MISSING DATA
S4403

FIG. 45

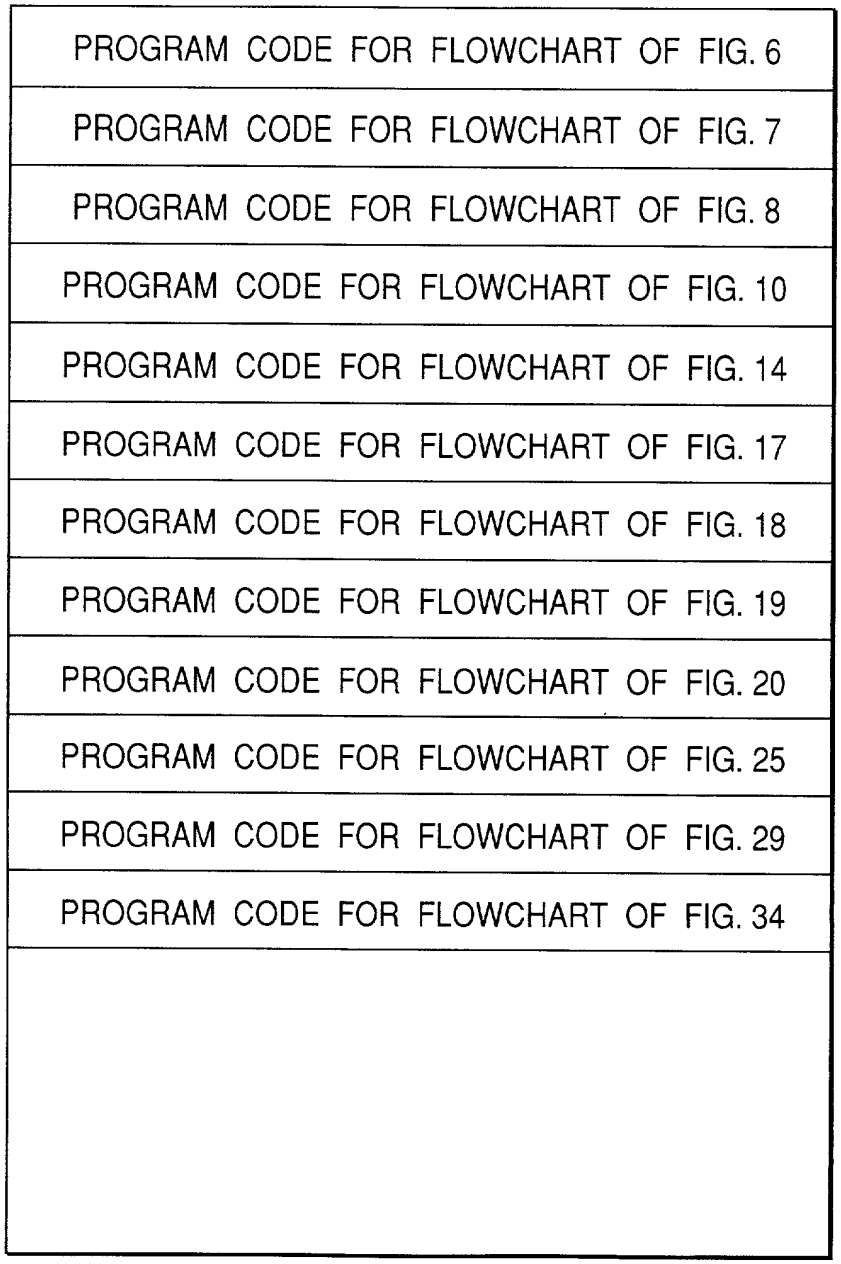
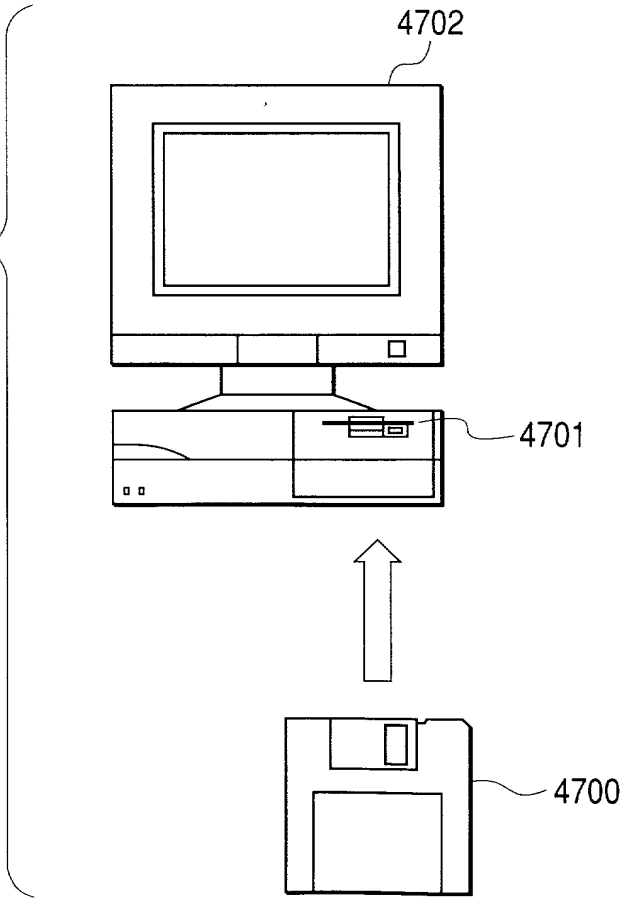

PROGRAM CODE FOR FLOWCHART OF FIG. 6
PROGRAM CODE FOR FLOWCHART OF FIG. 7
PROGRAM CODE FOR FLOWCHART OF FIG. 8
PROGRAM CODE FOR FLOWCHART OF FIG. 10
PROGRAM CODE FOR FLOWCHART OF FIG. 14
PROGRAM CODE FOR FLOWCHART OF FIG. 17
PROGRAM CODE FOR FLOWCHART OF FIG. 18
PROGRAM CODE FOR FLOWCHART OF FIG. 19
PROGRAM CODE FOR FLOWCHART OF FIG. 20
PROGRAM CODE FOR FLOWCHART OF FIG. 25
PROGRAM CODE FOR FLOWCHART OF FIG. 29
PROGRAM CODE FOR FLOWCHART OF FIG. 34

FIG. 46

PROGRAM CODE FOR FLOWCHART OF FIG. 6
PROGRAM CODE FOR FLOWCHART OF FIG. 7
PROGRAM CODE FOR FLOWCHART OF FIG. 8
PROGRAM CODE FOR FLOWCHART OF FIG. 40
PROGRAM CODE FOR FLOWCHART OF FIG. 41
PROGRAM CODE FOR FLOWCHART OF FIG. 44

FIG. 47



EP 2 296 065 A1